

# FOR THE EUSTON TO WATFORD LINE

See Advert. Page 14



"THE TIMES" OF THE TRANSPORT WORLD

# DECADE OF SILVER CITY FERRY

See Page 3

VOL. LXXIX No. 2050

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LONDON, JULY 12, 1958

PRICE NINEPENCE

## Royal Visit to Scotland

SCOTSMEN played the leading role in the development of the pneumatic tyre; Thompson introduced a hollow rubberised canvas tube, inflated with air and protected by a leather case as early as 1845. John Boyd Dunlop made a practical pneumatic tyre in 1888 and two years later the first detachable pneumatic tyre was made in Scotland. It is appropriate, therefore, that in this week's Scottish tour (regrettably followed by Her Majesty's indisposition) the Queen and the Duke of Edinburgh should have visited the Inchinnan factory of the India Tyre and Rubber Co., Limited, where tyre production has been going on since July 30, 1928, or for all but three decades. The company was formed in 1927 and labour was recruited from the then heavily depressed Lanarkshire coalfield; some of the former miners are still with the company and proved admirable builders of tyres. Incidentally, the building is on the site where the airship R34—first machine to fly the Atlantic in both directions—had been built. The company was acquired by the Dunlop group in 1936 but continues an independent production and marketing policy. During the war 23 per cent of the United Kingdom output of aircraft tyres came from its factory. Today 33 different types of tyre, made in 400 sizes, go out at the rate of two million a year for cars, commercial vehicles, passenger vehicles, earthmovers, tractors, trailers, carts, industrial trucks and agricultural appliances; 40 per cent of the India output from Scotland goes overseas. Subsidiaries produce India tyres in India, South Africa, New Zealand, Sweden and Ireland. Mr. G. E. Beharrell, chairman of the Dunlop Rubber Co., Limited, Mr. A. R. M. Geddes, managing director of Dunlop, and Mr. L. J. W. Bailey, director and general manager of India, were presented to the Royal visitors, with other officers who accompanied the party on the tour of the works.

## New Roads for Old

LAST autumn's conference at the Institution of Civil Engineers on the highway needs of Great Britain was described in our columns at the time as a valuable task in view of the large numbers of people affected by the deficiencies of our road system. The Institution has published papers and discussion in book form at £2, but the British public will be further indebted to the Roads Campaign Council for making available an attractive and easily assimilated summary of it all, entitled *New Roads for Old*, which drives home the lessons and insists on the necessity of still more being done. Almost simultaneously there has appeared from the same source a further booklet in the series *Roads Matter*. This deals with the south-western counties and tells the grim story of dislocation in the summer months and of such delays as make up the 90,000 hours wasted annually by commercial vehicles alone at Saltash Ferry. It advocates a motorway from Bristol to Exeter, bypasses to the well-known bottlenecks of Honiton and Bodmin, the bridging of the Tamar, of course, and other useful schemes in 20 well-illustrated pages. The British Road Federation this week has advocated an experimental parking town, for the investigation of parking problems and the control and finance of street and off-street parking. The example chosen for the B.R.F. investigation is Kingston-upon-Thames and a forceful case is made for a little clear thought on the subject in Berkeley Square instead of recourse to restriction and parking meters.

## Research in Additives

IN pursuing the aim of more power for less weight at lower cost the internal combustion engineer has sought aid from many sources. Progress in engine design has been linked with improvement of fuels. Almost more striking has been the development in the performance of lubricants. The chemical industry has in these spheres become the partner of the oil industry; the

chemist has assumed an importance equal to the automobile engineer in determining performance and improving design. Chemical additives, self-cleaning oils and constant viscosity have become the order of the day. Since the end of hostilities in 1945 Monsanto Chemicals, Limited, has been in this field, starting with the setting up of laboratories devoted to applicational research and technical service on the products. A small-scale screening test was initiated by the Monsanto chemists. By 1956 a considerable increase in laboratory facilities was needed and finally it was decided to design new oil additives technical service laboratories at

trams were running. The trams were single-deckers and the extensive system, totalling 30 route miles, was a model of B.E.T. operations, on which trailer working, parcels service and the potentialities of the motor bus were the subject of experiment and research, under the supervision of Mr. Emile Garcke, mainspring of the B.E.T. and first chairman of P.E.T. Modern bus operation began in 1913 and both before and after the demise of the trams in 1928 was the subject of intense competition. Under the chairmanship of Mr. Raymond Birch, however, most of the bus operations in the City of Stoke-on-Trent, adjoining Newcastle-

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Newport (Mon.) adjacent to the factory where the additives are made. This was opened on Monday of this week by Mr. Harold Watkinson, Minister of Transport, who was welcomed by the Monsanto chairman, Sir Miles Thomas. Sir Miles said that eight years ago the Ruabon laboratories were amplified by those at Fulmer, Bucks, to expand technological work on rubber, plastics and oil additives. In 1956 the Rideal laboratories (named after Sir Eric Rideal, a former director) were opened in Newport for research on economical manufacturing methods. The new laboratories the Minister was to open, by pressing a button to start up the engines in the test cells, were already being doubled in size.

## Gold for Diamonds

SEVERAL notable features distinguish the undertaking of the Potteries Motor Traction Co., Limited, which, as recorded last week, has just celebrated the sixtieth anniversary of its formation. Even Jove nods and this event was inadvertently described in our headline as a golden instead of a diamond jubilee. It was an occasion marked by particular cordiality between operator and civic authorities and, of course, it really commemorated a much longer association of the Stoke area with public street transport. The original tramway concern was one promoted by George Francis Train and from 1862 onward it gave almost continuous service until the abandonment of all the Potteries system 66 years later. It was, apart from the pioneer line at Birkenhead, the only one of Train's numerous schemes to escape from ignominious removal. Acquired by new owners in 1879, steam traction followed from 1881. Then in 1896 another change of control brought the nascent and energetic British Electric Traction group on the scene. The Potteries Electric Traction Company was formed two years later and by May 16, 1899, electric

under-Lyme and the surrounding country, have been rationalised, to the benefit of the public as well as of the operators. The goodwill engendered by the company in its first sixty years is a good augury for the next six decades; gold into diamonds indeed.

## New South Wales Railways

EARNINGS of the New South Wales Government Railways for the year ended June 30, 1957, amounted to £78,688,602 and working expenses totalled £75,351,603, resulting in a profit on operations of £3,336,999, an improvement of £2,855,266 over the previous year. Concessions allowed by the Department totalling £621,975 consisted of £487,386 in rebates of freight to consignees of mill products, flour exported, rice, and for canned fruits, jams and other goods, £100,669 in reduced charges for the transport of livestock and fodder, and £33,920 in travelling concessions to blind soldiers and their guides. An amount of £1 million was received from the Government as a contribution towards losses on working of country development lines and £800,000 for the Government Railways Superannuation Account, making the net receipts £5,136,999. This amount was insufficient by £5,794,288 to meet interest on loan capital, sinking fund contributions, and other statutory charges. During the year passenger journeys totalled 263,136,494, goods traffic hauled amounted to 18,142,441 tons, and 135,690 livestock wagons were hauled. Gross capital expenditure amounted to £12,065,803, of which £4,844,943 was for new rolling stock and £3,800,272 for electrification. New equipment included 39 locomotives, 32 passenger cars, and 116 goods wagons; orders were placed for additional diesel-electric locomotives and other modern equipment. The report records the completion of the major work of electrifying the western line between Sydney and Lithgow in June, 1957, and the resultant improved economy and efficiency.

## Tramroad Diamond Jubilee

DESPITE the general decline of tramways, one route in this country seems to be in little danger of being handed over to motor bus operation. This is the Blackpool and Fleetwood Tramroad which on July 14 completes sixty years of public service. Constructed by private enterprise under an Act of 1896, the eight-mile long line, of which 6½ miles was on private right-of-way, opened up a stretch of the Fylde coast of Lancashire which had previously been remote and virtually inaccessible. Southwards from the Gynn the promoters had hoped to gain access to Blackpool via the North Promenade with a terminus at the North Pier. But Blackpool Corporation resisted this and would permit only a back-street entrance to a point near the present North Station. This was over a single-track tramway with three passing places which was constructed by the Corporation and leased to the company for 21 years. It was along this section that on July 13, 1898, the official car carrying Major Marindin, the Board of Trade inspector, was intentionally blocked by strategically placed horse buses and vans in protest against the narrow clearance between the rails and kerbs. In consequence the inspector refused to pass this town section of track and the company was compelled to establish a temporary terminus at the Gynn from which point cars commenced public services to Fleetwood on the following day. Through running into Blackpool began on September 29, 1898.

## Shrewd Management

UNDER the shrewd management of John Cameron, who came from the Manx Northern Railway, the undertaking became a model of its kind and for just over 21 years, working expenses were maintained at about 44 per cent of the gross revenue, a ratio unequalled by any other private British tramway so consistently. With its fleet of 41 single-deck bogie tramcars, of which 26 were open-sided for holiday traffic, its small way-side stations and rather lightly laid sleeper track, the line possessed a distinctly transatlantic flavour. Following extension of the Blackpool borough boundary to beyond Norbreck on April 1, 1917, the Corporation negotiated purchase of the tramroad in order to extend its Promenade trams to the new area. Although the company held the reserved track portion in perpetuity, it was reluctantly compelled to sell because the Corporation signified that renewal of the lease of the Blackpool street section would be denied in 1919. A take-over price of £284,000 was agreed, including £10,000 to Mr. Cameron in compensation for loss of office. Blackpool took possession on January 1, 1920, and almost immediately connected the line with its town tramways.

## Recent Developments

THE end of operation of standard railway goods wagons over the portion of tramroad between Fleetwood sidings and Thornton Gate in 1949 made possible the laying of check rail along the entire route. This was completed early this year and has enabled the large double-deck units to operate to Fleetwood from the south end of Blackpool Promenade. On Tuesday, July 1, for the first time, double-deck units were operated over the whole of the original route between Blackpool North Station and Fleetwood, and will do so in future when required. As described in MODERN TRANSPORT of April 19, 1958, a 22-mile "Coastal Tour" is being operated by the new single-deck tram and trailer. This is a reminder that the former company owned three trailers in the early days, but converted them to motor cars in 1905 because their use was prohibited in the terminal towns. As early as 1904 the B. and F.T. pioneered motor char-a-banc services as a feeder to its tramroad at the Fleetwood end. These operated from Knott End on the north side of the River Wyre. By 1906 some 14 vehicles were in use under a subsidiary concern, Fylde Motor Services, Limited. The services appear to have been withdrawn following the completion of the Garstang and Knott End Railway from Pilling in 1908.





### Le Quatorze Juillet

On the 10th anniversary of the first cross-Channel vehicle ferry flight, our greetings and thanks to all who have helped in the development of this all-British enterprise—not least to the 759,000 passengers who have travelled safely and well on the Air Ferry since 1100 hours on July 14, 1948. In those 10 years, 215,000 cars (from more than 60 countries) and 70,000 motor cycles and cycles have been carried in 125,000 cross-Channel flights.

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The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements. In controversial subjects relating to all aspects of transport and traffic this newspaper offers a platform for independent comment and debate, its object being to encourage the provision of all forms of transport in the best interests of the community.

### A Look at Coal Distribution Methods

STATUTORY control of house coal supplies and prices is going next Monday and with it the last remnant of wartime consumer rationing. The reaction of the retail distribution trade at the close of a 19-year era will be awaited with some interest. Will it seize the easy way out of its admittedly stringent financial situation by simply increasing prices to the consumer, or will it strive towards a long-term reduction of merchandising costs through the adoption of more mechanical handling in its efforts to achieve a wider profit margin? In all probability we shall see an approach on both fronts. The decision to deration coal came after publication of the report of the Robson committee on coal distribution costs.\* This committee, appointed in 1956, was to ascertain the items of cost which made up the difference between pithead prices and those paid by the consumer, and to investigate distribution costs and profit margins. It numbered among its members Mr. Christopher T. Brunner and Mr. W. J. P. Webber, familiar in the transport sphere. Its principal criticisms are directed at the machinery employed by the Ministry of Power for periodical fixing of retail profit margins; this tardy process is now swept away along with the removal of price controls. The report has no criticism of the general level of transport costs by rail or road; emphasis is on the affairs of the retail distributors. The periodical surveys of profit margins have operated to prevent their recouping higher working costs (principally no doubt in respect of labour) and the committee suspects strongly, moreover, that retailers who have sunk capital into mechanisation schemes or who have perhaps invested in bulk road delivery vehicles have come off worst.

### Rail Hauls the Rule

LAST year about 30 million tons of domestic coal was distributed, 23 million tons of it being moved to railway-connected depots, about five million tons going out by road and two million tons by coastwise shipping. Retail distribution is in fact traditionally geared to railways; since 1951, when standardised qualities of coal were introduced, there has been a system of zone charges based primarily on rail freight rates. In the recent past a retailer's allowances to cover his costs and a fixed profit margin have together represented just 20 per cent of the average price of coal to the domestic consumer. It is this margin which is now freed from control; what happens to it will depend in great measure on the attitude of the trade towards greater efficiency. There is the choice between stability, represented by passing on higher costs and securing a steady profit, or competition, arising out of enhanced efficiency. The committee fears that the easier course will prevail. It reserves some of its more trenchant observations for mechanical handling progress—or the lack of it: "general methods of distribution do not appear to have undergone much change [since 1939]... the trade as a whole appears to be adopting mechanical handling with some reluctance." There has been a substantial reduction in the number of businesses engaged, but their trading is still amazingly disparate. Out of the 16,700 fewer than 350 handle more than 10,000 tons of house coal per annum, more than half less than 1,000 tons. All of this has been done on a standard net profit margin which has been raised by a reluctant Ministry of Fuel (as it then was) from 1s. per ton in 1950 to 2s. 9d. at the present time.

### Mechanisation of Depots

NO one, therefore, should be surprised if the trade, with some notable exceptions, opts to use its unwonted freedom in the direction of higher prices (at least on the better grades) rather than in streamlining its methods. Indeed, there are more excuses for

not mechanising than points in its favour. The only good reason which the trade generally can see is the solution of the acute labour problem, accompanied by an upgrading of some jobs. The committee is frankly pessimistic about possible gains to the consumer in the shape of lower prices. It says that the number of depots would need to be reduced by a process of concentration and that the resulting large depots must be completely mechanised, possibly on a shared basis, for a real improvement in efficiency to result. So far there is probably insufficient evidence upon which to assess the merits of complete (as opposed to partial) mechanisation, but it is suggested that the Ministry of Power should select likely areas for experiments and invite the interested bodies in those areas to report on the practicability and potentialities of both concentration and mechanisation and the methods which might best be used to bring them about.

### Disappointing Case Histories

BEFORE 1939 there was little incentive, with an abundant permanent and casual labour supply available, for merchants to mechanise. Even today, only some 450 depots out of a total of 5,800 are regarded as suitable from the viewpoint of their throughput alone. The National Coal Board considers that an annual 75,000 tons is the minimum requirement. No rail depot of the type jointly used by more than one merchant has so far been completely mechanised. The Chamber of Coal Traders said there was insufficient experience in these matters and that the introduction of mechanical handling so altered operations and the tonnage handled as to prevent true comparisons with former years. But one company which has been to the forefront of development reported disappointingly that at three depots additional costs exceeded savings by more than 2s. per ton, seemingly because higher throughput per man is more than counterbalanced by his higher wages, increased loss through breakage into smalls, and plant maintenance, repair and depreciation charges. On the other hand, the N.C.B. supplied information of four depots showing savings ranging from 6d. to 1s. 9d. per ton.

### Rate Rebates Sought After

IN at least one other respect the trade is not anxious to proceed to examine concentration of depots, a natural concomitant in most cases to mechanisation. This is the additional transport costs in respect of the greater radius of local distribution involved from the centralised depots. It feels from experience hitherto that these additional costs will not be offset by mechanisation itself and they can only be recouped if the savings made by British Railways, resulting from its ability to run block or part trains of coal to fewer but larger depots, were passed on in the form of lower charges. The Chamber of Coal Traders, whose views are expressed thus, wants consultations with the railways in particular areas where economic concentration and mechanisation schemes appear feasible. Clearly, these discussions could provide a prelude to the wider approaches which the committee has recommended. The Chamber feels that the establishment, management and joint operation of a fully-mechanised depot should be in the hands of the traders, through a group company established for the purpose. Each participant would retain full independence as a competitive unit. One aspect of mechanisation briefly touched upon but which may, and ought, to receive much more attention is the bulk delivery vehicle, which weighs out sacks at the consumer's door. This cuts out an expensive and time-consuming bagging process at the yard. Throughout the report it seems to have been taken for granted that supplies from pit to retailer will continue to go by rail. It should be noted that the B.T.C. is opposed, in principle, to the admission of roadborne coal to depots on its property, even where road transport is cheaper. Moreover, the N.C.B. is taking no steps to encourage road movement of coal by providing special loading facilities, despite which road tonnages are going up—33 million tons were hauled from pithead and opencast sites in 1957. On a sample 7,000,000 tons of this, 40 per cent went direct to consumer. The average haulage charge to all types of user was 9s. 9d. per ton. Road transport still moves little house coal, save in three closely defined areas; the railways are therefore likely to retain their traditional rôle. Whether they can offer worthwhile rate reductions even with block trains while industrial fuels slide away to road is another matter.

### Forthcoming Events

- July 13.—Omnibus Society (North Western and Yorkshire). Tour by service bus of industrial towns around Manchester. Meet Chorlton Street Bus Station, Manchester (No. 20 Stand), 11.15 a.m.
- July 19.—Permanent Way Institution. Visit to H.M. Dockyard, Chatham.
- July 20.—Railway and Canal Historical Society. A centenary visit to Netherton Tunnel by *Lady Halkerton*. 12.30 p.m., with bus connection from Birmingham.
- July 26.—Light Railway Transport League. Paper by R. B. Parr, "The Wemyss Tramways," At Fred Tallant Hall, N.W.1. 3 p.m.
- July 27.—Norbury Transport and Model Railway Club. Tour of Millwall Extension Railway.
- July 27.—Norbury Transport and Model Railway Club. Sheffield tram tour.
- August 24.—Omnibus Society (Northern). Visit to Northern General Transport Co., Limited. Meet Chester-le-Street Depot, Gateshead. 2.15 p.m.
- September 1-7.—Society of British Aircraft Constructors. Flying display and exhibition. At Farnborough. (Public days September 5, 6 and 7.)
- September 8-12.—Municipal Passenger Transport Association. Annual conference. At Blackpool.
- September 26-October 4.—Commercial Motor Transport Exhibition. At Exeter Court.
- September 28-October 7.—International Railway Congress. At Madrid.
- September 29.—Passenger Vehicle Operators Association. Annual dinner-dance. At Grosvenor House, London.
- October 13-15.—Road Haulage Association. Annual conference. At Torquay.
- November 5-16.—International Motor Show. At Turin.

\* Report of the Committee of Inquiry into Coal Distribution Costs in Great Britain. Cmnd. 446. H.M.S.O., price 5s. 6d.





The land side of the car ferry terminal building at Ferryfield

WHILE Silver City Airways is more than 10 years old, its original operations had no particular bearing upon the movement of road vehicles by air, however famous as a pioneer in that field it has since become. Monday of next week, however, will see the 10th anniversary of a flight from Lympne to Le Touquet by a Bristol 170 (G-AGVC) which had been hired from its manufacturer. The aircraft carried a Silver City car normally used by its then managing director, Air Commodore G. J. Powell, and the purpose of the exercise was to determine the practicability of a charter service whereby motorists could fly their cars between Britain and the Continent. The use of the word "charter" calls for mention since some may have forgotten that in July, 1948, there was no provision for the operation of regular services by independent operators as associates of one or another of the three (now two) airways corporations.

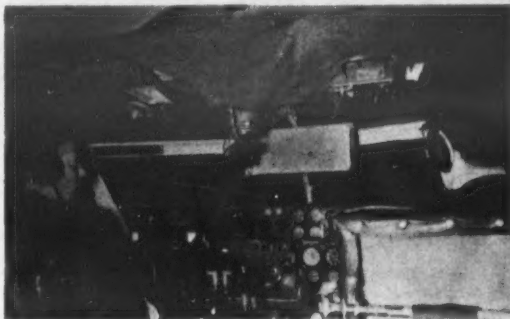
Despite a relatively late start and the somewhat awkward legal conditions of operating, sufficient traffic developed in the shape of 170 cars to justify plans for resuming the service the following summer and preferably on a scheduled basis. This became possible as a result of Governmental decision to authorise associate agreements and Silver City was among the earliest operators to receive a licence—the maximum currency was then a year. Three Bristol 170s were chartered from the Bristol Aeroplane Co., Limited, and 2,600 cars, 100 motor cycles and 7,900 passengers were carried during the season. For the next two years the service was not operated during the winter.

#### Considerable Developments

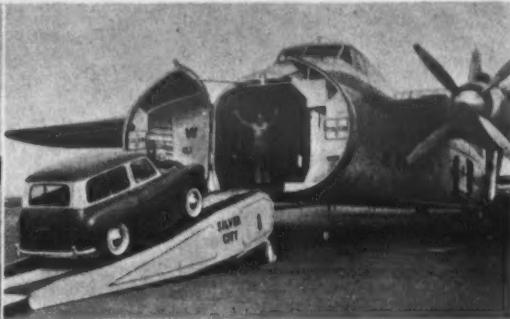
In 1951 there were considerable developments. Fares were cut—there had been a previous reduction in 1950—and eight Bristol 170 Mark 21 machines were in use during the peak period. At the end of the year it was recorded that some 7,500 cars, 3,240 motor cycles, 1,355 bicycles and 30,137 passengers had been carried while service was continued throughout the winter. This development, which was to have an influence on the company's

later encouragement of freight movement by air, made it possible to carry 2,000 beef cattle across the Channel. It was obvious that any major programme of expansion needed a greater degree of security than was available on the basis of two-year licences and representations were made to that effect. In 1951, Silver City was the first independent operator to receive a 10-year licence which was in respect of its Lympne—Le Touquet service. Encouraged by this degree of security another route from Lympne was opened in 1952 to Ostend, while an aircraft was based on Southampton to operate thence to Cherbourg.

As it turned out national finances militated against these measures receiving their just reward since foreign travel allowance was cut and traffic figures declined in consequence. Undeterred by this, orders were placed by S.C.A. for six of the Mark 32 version of the Bristol 170, which with lengthened fuselage was to be able to carry three cars and 15 passengers. Fares were reduced and there was a marked increase in traffic, with more than 39,000 vehicles and 96,600 passengers carried during the year. This was really something and an order was placed for three more Mark 32s for delivery for the 1954 season when fares were again cut and a new service opened from Lympne to Calais.



The Decca Flight Log is proving most useful in the Silver City aircraft on the cross-Channel services; one of the Douglas Dakotas which are used with Bristol 170s on inclusive tour flights and, right, a Hillman Husky entering a Mark 32 Freighter



That year saw the purchase of control of Silver City by the General Steam Navigation Co., Limited, which is of course, itself a subsidiary of the Peninsular and Oriental Steam Navigation Company. This substantial backing was to be important to the company and afforded strong encouragement when such major work was in hand as the construction of a new airport at Ferryfield on Dungeness, near Lydd, primarily for car ferry services. The work was necessary because Lympne, which had no hard runway, was already saturated by peak period traffic, and as an airport it suffered also from days of indifferent visibility, when Dungeness was clear. Transference from the old airport to the new began in July and was completed at the end of the season. During the year the number of vehicles carried again rose and there was also a marked increase in freight traffic. And so the story goes on. The

will amount to approximately 1 in 4 of all cars crossing to France. By 11 a.m. next Monday, Silver City will have carried 215,000 cars and 759,000 passengers on 125,000 cross-Channel flights.

#### Growth in Staff

One of the remarkable things about S.C.A. is the spirit which pervades its operations and the remarkable degree of flexibility which has been retained in an organisation which now has a staff of over 1,000. The extent of this expansion perhaps comes home to one on learning that there are roundly 600 at Ferryfield. The greatest asset a transport undertaking can have is a readiness to learn, coupled with ability to make use of the lessons in practice, and consequently a tour of any of the bases will, if they have not been visited for a year or so, be accompanied by comments on improvements in procedure or structure made in the light of experience.

It is not, moreover, as though there have



The first car to be flown from Lympne to Le Touquet

not been changes which have called for modification of the organisation. Air Kruse, which had been operating cross-Channel passenger services from Lympne, was acquired and subsequently built up a very considerable traffic in connection with inclusive coach tours. A new passenger-handling building for these services was opened at Lydd last year with the Air Kruse offices above it, but it was subsequently decided to merge the company in Silver City and this has made possible a re-organisation of the office accommodation with the administrative offices in the erstwhile Air Kruse premises and operations able to spread itself a little more in the main terminal block. It is also the intention in due course to achieve a great degree of interchangeability among the traffic staff, although it is likely that, by reason of the difference in work, two handling units will be maintained, the one for purely passenger loads and the other for the car ferry.

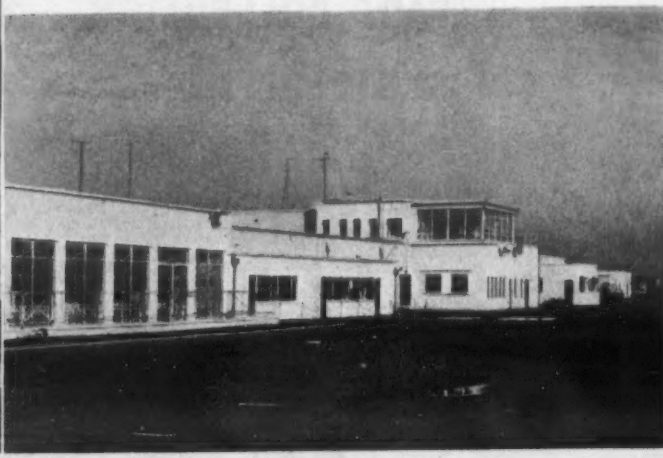
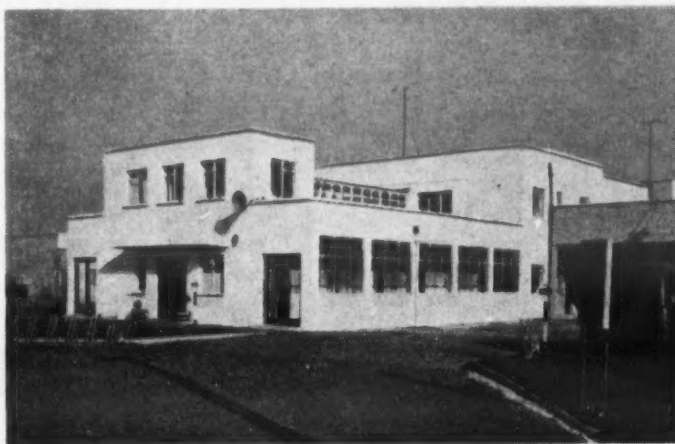
#### The Silver Arrow

Apart from inclusive tours and the carriage of passengers unaccompanied by any sort of vehicle on its ferry flights, Silver City has also the Silver Arrow service between London and Paris. Passengers make the English section of the journey in East Kent coaches, which

leave Victoria Coach Station. The flight to Le Touquet is normally by Bristol 170, and often one of the two Mark 32s which have this year been converted to high-density passenger carriers with room for 56, and the next stage is a short coach ride to Etaples Station. From there to Paris Nord a 94-seat Budd railcar with, as required, an 80-seat trailer provides a fast service which takes little over two hours for the 140 miles. The single fare between the capitals by this route works out at £4 10s. and the return at £8 10s., which is a highly competitive rate. Traffic at weekends generally requires the use of two aircraft, but midweek it thins a little. Our own view is that one cause of this, apart from the normal peak problems, is the seasonal nature of the operation which allows it to be forgotten for several months.

Behind all this movement of aircraft there lies a considerable organisation concerned merely with the short-range cross-Channel movements and taking no account of the very active northern division of Silver City. We have already indicated that there are roundly 600 on the staff attached to

(Continued on page 10)



The recent landwards extension of the main terminal building has operations offices on the first floor; Silver City House, the new headquarters in Brompton Road; right, view from apron of the ferry terminal building showing from the left the lounge, the forward passenger waiting-room, both of which have recently been enlarged, the control tower and freight building



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ALSO MANUFACTURERS OF "HELMAN" STEEL EQUIPMENT AND STEEL PLATE FABRICATIONS



## LORRY—BUS—COACH

## T. and G.W.U. Played over Meat Strike

OUTSPOKEN condemnation of the role played by T. and G.W.U. officers is uppermost in the report of the committee of investigation into the unofficial strike of Smithfield meat market drivers in London. A report of the public hearing appeared in our June 28 issue. The report says that the strike itself was a "flagrant violation" of the constitutional machinery set down in the J.I.C. for London Meat Carriers; that attempts by union officials to get the drivers back to work "lacked the vigour which should properly have been given to them"; that the attitude of these officials "did not adequately reflect their disapproval of the irregular behaviour of their members"; and criticises the union for not accepting the employers' offer to send the wage dispute to arbitration. The unions' attitude to unauthorised conduct should be devoid of equivocation and above reproach, says the report.

The principal cause of the nine-week strike was a sense of dissatisfaction among drivers at the alleged delay in handling their pay claim. But, says the committee, this claim was a complicated one which could not be dealt with easily and quickly. It is not convinced that the facts of the case or the course of negotiations were adequately explained to the workers by the union. There was an insufficient understanding of the constitution of the J.I.C. and an insufficient respect for its provisions. This could only be rectified by persistent effort on the part of the constituent bodies.

## Conciliation Hope

AS we go to press we learn that both sides involved in the Smithfield meat drivers' wages dispute have asked for a meeting with Ministry of Labour conciliation officers to try to find a way towards a solution. This was suggested by the T.G.W.U. last week; it is hoped to fix a date shortly. One object would be to consider on what terms of reference the complex dispute could be referred to a third party. The union claim is for a 15 per cent wage increase to compensate drivers for the higher speed limit for some types of vehicle. Both sides have examined carefully the report of the committee of investigation into the causes of the recent unofficial strike at Smithfield, but no joint discussion of the report is likely. On this subject, Mr. F. Eastwood, national secretary of the road haulage section of the Transport and General Workers' Union, said the union in the course of things would examine what had happened to try to avoid any repetition, but not with anything in the report particularly in mind. They were always ready to listen with respect to any committee's opinion but felt that the people who had to deal with the problems were the best judges of the right and wrong things to do at any particular time, even though they might sometimes make mistakes. He was disturbed at the making public in the report of information given in a private session of the inquiry committee.

## Rejection of Arbitration Deplored

DELIBERATE rejection by the trade union of the well-tried arbitration procedure within the framework of the National Council for the Omnibus Industry was a sad and primitive throw-back to

jungle days in industrial relations, a move quite out of keeping with progressive ideas, and completely inappropriate to the circumstances of the bus industry. Mr. R. P. Beddow said this at the annual general meeting of Ribble Motor Services, Limited, in Preston last week. The only logical explanation of the unions' policy throughout the subsequent wage dispute and strike appeared to be a determination not to accept the award of an arbitration tribunal unless that award suited them—"surely a most regrettable and reactionary policy and one which should be utterly condemned by all responsible people," said Mr. Beddow.

## Milk Drivers Get Handbook

EVERY member of the transport staff of the Express Dairy Co. (London), Limited, has been given a booklet *All Clear for the Express* which is in effect a pocket safe-driving manual. Pithily written, it overlooks no hint or tip which may be of use to the driver on the road or in a



A Guy Warrior with Meadows 6DC500 diesel engine used by Lansj-Linjat OY, of Finland, on an 18-mile route from Tampere; right, Neath and Cardiff Luxury Coaches, Limited, now has three A.E.C. Reliance coaches with Weymann Fanfare bodies

depot. A copy will be sent to any interested fleet transport operator—he should write to the public relations officer at Tavistock Place, W.C.1.

## Corona Drinks Fleet in the News

NEARLY 800 delivery vehicles calling on about one million houses weekly, in addition to some 40,000 retail outlets, are involved in a takeover offer by the Beecham group for the soft drinks business of Thomas and Evans, Limited, Porth, Glam., manufacturer of Corona products. Corona drinks are delivered from 53 factories and 57 distribution centres. The company also owns 90 grocery shops, including five self-service stores. The board has not yet expressed any opinion of the Beecham offer.

## Ticket Not Retained for Inspection

THERE is no obligation on any bus operating staff to try to find a ticket discarded by a passenger, it was stated at West Hartlepool (Co. Durham) magistrates court on Monday when a passenger was summoned for failing to pay his fare on a public service vehicle. He was given an

absolute discharge on payment of 9s. 6d. costs. The man was alleged to have told a bus inspector that he had thrown his ticket on the floor, remarking, "I have paid for my ticket. That should be enough." The magistrate said that although they were granting a discharge, the transport department had been justified in bringing the case.

## Sales of L.T. Rover Tickets

IN the first 18 weeks of this year, i.e. up to the commencement of the bus strike on May 5, London Transport sold 53,000 Green Rover 58 tickets on its Country buses and 55,000 Red Rover 58 tickets for travel on Central buses and trolleybuses.

## Hesketh Injunction Fails

THE Road Haulage Association has met with complete failure in its attempt to have the decision of the Transport Tribunal in the Hesketh case overruled in the High Court. This was the appeal (MODERN TRANSPORT, March 15) in which the Tribunal reiterated its ruling that departure from normal use by the holder of an A-licence justified the licensing authority in refusing to renew it on expiry. T. Hesketh, Limited, sought an injunction in the Divisional Court for an order quashing the judgment of the Tribunal. Lord



returned a surplus of £5,652, reducing the total operating deficit to £43,365 (surplus £186,182). After meeting appropriations the total deficit charged to general reserve was £83,710; last year the reserve benefited to the extent of £86,208.

## Liverpool Traffic Increases

TRAFFIC on Liverpool Corporation Passenger Traffic Department buses is still increasing, due to additional services to new housing estates, and also to the discontinuance of the Liverpool Overhead Railway, but there is, like most experience elsewhere, a decline in relation to mileage operated, says the 1957-58 annual report. Passenger revenue was £6,461,025, a record, but to earn the £695,376 increase over the previous year 1,154,710 more miles were run. The net surplus for the year was £37,137 (£16,902), after absorbing an operating deficit of £119,424 on the last trams, which were withdrawn during the year.

## Labour Relations in Birmingham

DURING a debate on the report of the special sub-committee on Birmingham City Transport, a minority group member, Councillor J. F. Vernon, said he did not think the department got the best out of its labour force. It was not making sufficient effort to satisfy its customers, nor leading its employees out of restrictive practices. Councillor T. G. John complained about the speed of the Outer Circle route, with buses travelling so slowly that the engines "almost stalled in top gear." He hoped some arrangements could be made with the men's representatives to speed them up. Responding to the debate, Alderman L. Chaffey, chairman of the Transport Committee, said they would negotiate with the committee representing the workers' side to see if they could speed up the Outer Circle.

## Municipal Results

West Bromwich.—There was a net surplus of £1,322, despite considerably increased working expenses. Passengers increased in numbers.

Maidstone.—Trolleybuses showed a surplus of £18,332 (£24,579) and buses a surplus of £4,206 (£2,601). After provisions the net surplus on the undertaking was £38.

Brighton.—There was a deficit on the Corporation buses and trolleybuses of £5,301, despite a general fares increase in November last. This produced £1,242 additional revenue, making the total £325,893.

Wolverhampton.—Gross surplus was £165,121 (£128,382), net surplus £39,709 (£3,717). Reserve now stands at £148,023. There were two general fare increases during year. Mileage operated by buses and trolleybuses together was virtually unchanged.

Leicester.—For the first time in its history the city transport undertaking is free of debt; £10,767 is to be taken from last year's surplus of £72,905 to secure this happy position. The balance goes to reserve. Passengers carried fell by nearly five million to 99 million, probably due to fares resistance.

## Bus and Coach Developments

W. G. Anderton (Andy's Coaches) seeks express services licensed to Superb Coaches (Birmingham), Limited.

A. Mayne and Son, Limited, Clayton, Manchester, applies for the excursions and tours from Audenshaw of A. Lea.

Evan's Coaches, Limited, New Tredegar, seeks the licences of C. E. Lane.

W. G. Richards and Sons, Moylgrove, near Cardigan, applies for the licences of Owen Williams and Sons.

Birmingham and Midland Motor Omnibus Co., Limited, applies for a comprehensive revision of its routes between Leamington and Warwick.

Hants and Dorset Motor Services, Limited, proposes a new bus service between Southampton and Warsash (Fleet End) via Thornhill Park Estate, Swanwick and Warsash. It would replace most journeys on Service 78 operating between Woolston and Warsash.

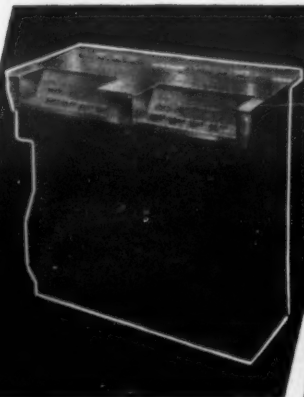
## FARE COLLECTION

## SYSTEMS

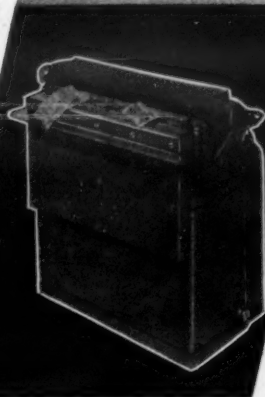
Speed, ease, accuracy — these are the qualities everywhere associated with

BELL PUNCH machines, four of which are shown here.

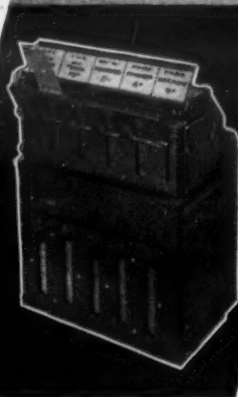
## TOP SPEED TICKET ISSUE with BELL PUNCH

THE S.P.  
For railways

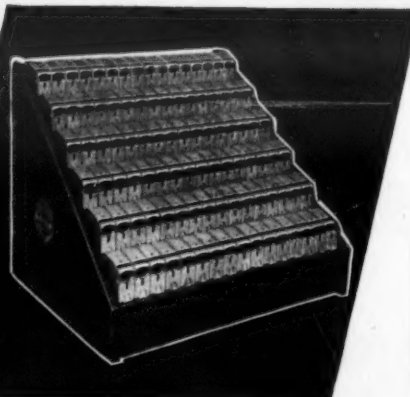
Self printing for speed and accuracy, issuing 2 tickets per second.

THE SOLOMATIC  
For one-man bus operation

Pre-printed coloured tickets from driver to passenger in a second — automatic overprint of stage, date, etc.

THE ULTIMATIC  
For railways

Speedy issue of pre-printed coloured tickets with automatic dating.

THE BELLMATIC  
For railways

Handy container units for clean, compact ticket storage.



If you would like full information about these or about the many other products in the BELL PUNCH range, let us put you in touch with the BELL PUNCH distributor in your part of the world. He will gladly advise you on the BELL PUNCH method best suited to your needs.



# CHICAGO SUBWAY EXTENDED

*In Conjunction with Expressway Road*

## INAUGURATION OF ACCELERATED SERVICES

AS already recorded in MODERN TRANSPORT, the Chicago Transit Authority recently extended the Logan Square—Congress subway service over the Garfield Park (now Congress) and Douglas elevated routes which ran westward from the Loop; the Douglas branch now leaves the other line at Loomis Street close to Racine Station. The Logan Square line is known as the Milwaukee—Congress. Apart from the removal of the Garfield Park and Douglas trains from the elevated tracks

improve connections with local bus services. They serve as exits at all times and as entrances when required during peak hours and at night and on Sundays and holidays when fares are collected on the trains. The accompanying diagram shows the staggered stop system which operates from 6 a.m. to 10 p.m. on Mondays to Fridays and from 7 a.m. to 6 p.m. on Saturdays. By this the A trains (Logan Square—Des Plaines Avenue) do not call at Western and Grand between Logan Square and



Station buildings on the new subway route are to a standard design and these views of California Station shows the appearance of the buildings on a street viaduct crossing the expressway and rapid transit line; right, the ramp leading from the entrance to the platform

and the consequent reduction in peak hour traffic pressure on the Loop, the newly opened line is of particular interest in that the extension of the subway has been linked with that of the West Side expressway and the Garfield Park tracks have been relocated in the centre of the new dual-carriageway road which takes four traffic lanes in each direction. This is not yet complete and from Cicero to the western terminus at Des Plaines Avenue, Forest Park, the trains will continue to use temporary tracks at ground level which involve a series of grade crossings of existing thoroughfares.

Construction of the first two Chicago subways, the north-south State Street line and the Milwaukee—Congress line, cost \$75 million with the city of Chicago providing the greater part of this from the city traction fund. This was derived from franchise payments from the privately-owned transit companies which were later taken over and merged in the Chicago Transit Authority. The contribution from the United States

Government to the construction of these two subways was made through the then Public Works Administration and totalled nearly \$26 million. The new West Side subway and its connection with the Milwaukee—Congress subway has been financed by the city of Chicago. Roughly \$2 million was obtained by the sale of revenue bonds met by the subway rental paid by the C.T.A., while \$25 million came from a general obligation bond issue. The transit undertaking will, however, as in the case of the previous subways, repay the city for the cost of fixed equipment—a figure in this case of \$12,300,000.

### Possible Precedent

Federal funds have matched local authority expenditure for the highway work and this has led to the hope that comparable grants will be

Lake Transfer Station and present it at the Clark and Lake elevated or L station. The reverse process is for passengers from the L lines to obtain the slip at State-Dearborn and Van Buren and to present it when entering the subway station on Dearborn Street between Jackson and Van Buren Streets.

### Level Crossings Eliminated

When the work is completed 27 street crossings will have been eliminated and already 17 of these have gone with the opening of the new service—disappearance of the remainder awaits the completion of the permanent way between Cicero and Des Plaines Avenue. Since September, 1953, the Garfield Park trains had been using Van Buren Street between Racine and California avenues since the original line impeded construction



This view of the express highway shows the tracks for the new line installed between the carriageways and on the right the Garfield Park elevated service on its temporary location

available for other expressway schemes. Two of these envisage reserved track railways and the other traffic lanes reserved for buses. The city of Chicago has been responsible for the project between the west bank of the Chicago River and Laramie Avenue, part of the expressway in that area and for the new terminal facilities and sidings at Forest Park. The latter replace those at Laramie Avenue. The section from Laramie Avenue to Forest Park is being constructed by the State of Illinois and Cook County using highway funds, because road construction in that area is their joint responsibility and involves relocation of the Garfield Park tracks and structures.

On the new section served by subway trains there are 14 stations at average intervals of .7 mile. At eight of the stations entrances and exits additional to the main ones have been, or will be, provided to

of the new expressway and this temporary track is being removed as rapidly as possible. So also is the first half-mile of the elevated structure in the neighbourhood of Halsted and Congress.

Rolling stock for the new extension consists of all-metal Series 6000 cars utilising equipment from P.C.C. trams which have already been illustrated in MODERN TRANSPORT. These will maintain the entire A service but, as an interim measure, some of the older Series 4000 all-steel cars will be used in peak hours on the B service. The latter will be replaced when 100 cars now on order have been delivered by early next year. It may thus be that some of the 45 trams which were withdrawn from the last remaining Chicago tram route—that on Wentworth Avenue—on the same day (June 22) that the subway extension started will contribute to the new development in Chicago rapid transit.



The considerable savings and increased comfort of modern high speed diesel railcars are now being enjoyed by many people all over the world.

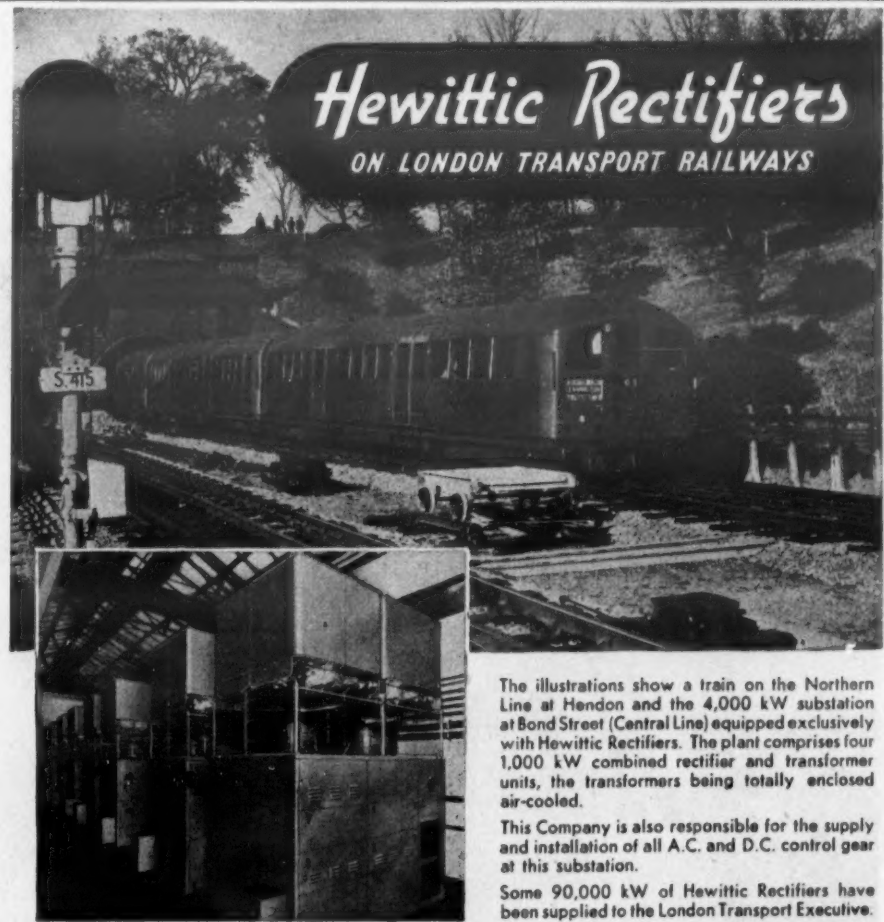
In Britain, over 98% of the British Railways lightweight multiple-unit stock incorporates B.U.T. power units, which are also used in Northern Ireland, Eire, Holland, Portugal and by British Overseas carriage builders supplying railways in Australia, India, Rhodesia, Nigeria, Norway, Egypt and South America.



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from the combined resources of



The illustrations show a train on the Northern Line at Hendon and the 4,000 kW substation at Bond Street (Central Line) equipped exclusively with Hewittic Rectifiers. The plant comprises four 1,000 kW combined rectifier and transformer units, the transformers being totally enclosed air-cooled.

This Company is also responsible for the supply and installation of all A.C. and D.C. control gear at this substation.

Some 90,000 kW of Hewittic Rectifiers have been supplied to the London Transport Executive.

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## LETTERS TO THE EDITOR

### Effectiveness of Horse Power

The Editor is always glad to receive letters from readers on subjects germane to the transport industry, but these should be written as concisely as possible. The opinions expressed therein must not, however, be regarded as having editorial endorsement. Where correspondents desire to use a nom-de-plume it is essential that the Editor should be informed of the name and full address of the writer as indication of good faith.

SIR,—Included in the second part of the article entitled "Two Centuries at Middleton," in your issue for June 14, there is an interesting little table from which I have deduced that, based on working costs, one man was evidently considered to be roughly equivalent to one horse, way back in 1810.

Having watched, from my office window, the antics of a gang of eight men who took 11 days to finish (none too well, either!) one small job, I had formed the conclusion that one horse, unaided, was more effective than eight men, unsupervised.

Could we, between us, have struck on a truth which might go some way to explain the economic predicament of this dear old country of ours?—Yours faithfully,

W. A. PARKER.

Apricot Hall,  
Sutton-cum-Beckingham, Lincoln.

### Diesel Exhaust

SIR,—There has been considerable public discussion following the Duke of Edinburgh's suggestion that vehicle exhaust pipes should have their outlet at a higher level.

The controversy is to some extent academic, because if the injectors and pumps of diesel engines were working efficiently there would be no smoke emitted.

Thus the campaign to be waged should not be against diesel engines, which are extremely economical in operation, but in favour of more frequent and thorough servicing.—Yours faithfully,

E. H. ROBINSON,

Director, Leslie Hartridge, Limited.  
Buckingham.

### Fairlie Locomotives

SIR,—In your June 28 review of the book *A Pictorial History of the Festiniog Railway*, it was stated that the two Fairlie locomotives on this railway are the only ones still in existence. This is not quite correct, as the double Fairlie locomotive *Josephine* which formerly ran on the New Zealand Government Railways has been preserved and is displayed near the Dunedin railway station.

It was reported early this year that a single Fairlie, formerly N.Z.R. No. 28 of Class R, and until quite recently still active in industrial service, was lying intact near Repton, in the South Island.

According to the January-February issue of the N.Z.R. Staff Bulletin two other New Zealand

double Fairlies, the class B locomotives *Snake* and *Lady Mordawnt*, built by the Avonside Engine Company in 1874, are believed to be the first locomotives constructed in Great Britain with Walschaerts valve gear. The motion of *Snake* survived the locomotive as part of a steam crane and has recently been given to the South Kensington Science Museum by the New Zealand Railways.—Yours faithfully,

J. W. SUTHERLAND.

3 Heathfield Road,  
Stockport, Cheshire.

### HIGH-SPEED HIGH-STRENGTH FASTENINGS

#### Avdel Lockbolts

NOW being manufactured in this country by Aviation Developments, Limited, Kingsbourne House, 229-231 High Holborn, London, W.C.1, under American licence is the Avdel Lockbolt, a high-speed high-strength system of fastening widely used in many industries in the United States of America. Designed to replace conventional fasteners, such as nuts and bolts and rivets, in the fabrication of metal structures and claimed to have much faster fitting speeds, the Lockbolt assembly consists of a headed bolt with a series of annular locking, breaking and pulling grooves and a locking collar. Lockbolts are set automatically by using a portable pneumatic pullgun.

In operation, the Lockbolt is inserted into a prepared hole and the locking collar placed over the protruding bolt tail. The pullgun is then applied, the jaws in its nose automatically gripping the pulling grooves on the bolt tail. When the gun trigger is actuated, an axial pull is exerted on the bolt and the reaction to this pull is taken against the locking collar by a swaging anvil of the gun so that the work is clenched tightly together. As the pull on the bolt continues the anvil of the gun is drawn over the collar, swaging and locking it into the locking grooves of the Lockbolt to form a rigid permanent lock. The pull continues, to break off the bolt tail at the breaking groove so that the Lockbolt is positively set at a predetermined tension. The gun then automatically disengages itself from the swaged collar.

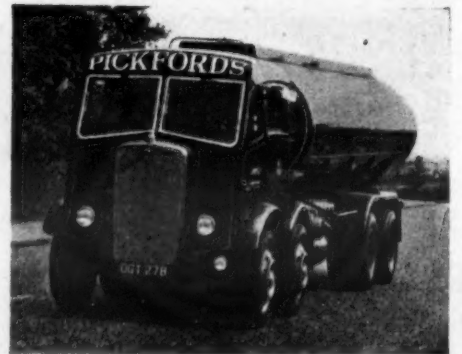
#### Placing Sequence

The placing sequence of the Lockbolts is continuous, automatic and rapid and an unskilled operator is said to be able to set up to 30 bolts per min. at a uniform tension and finish. Fitted Lockbolts are claimed to have a high resistance to fatigue and vibration in addition to high shear and tension strengths. Initially, the British manufacturer is producing commercial-type Lockbolts of  $\frac{1}{2}$  in. and  $\frac{3}{4}$  in. diameter in steel and high-strength aluminium alloy. Later, larger sizes will be produced.

## Don't let your efficiency slip—B.R.S. will have the answer

Circumstances may be against you. But British Road Services are on your side — always. A telephone call to your local B.R.S. depot quickly brings you a helping hand from a nationwide organisation with a willing and experienced staff and a vast fleet of vehicles of all kinds, regularly maintained, and ready to tackle any job, at any time. Modern methods and equipment ensure careful attention to every load, and the B.R.S. teleprinter network provides the means for rapid transmission of your special instructions.

B.R.S. (Pickfords) maximum capacity 8-wheeler for liquids in bulk. Within their diverse fleet B.R.S. have a full range of tank vehicles suitable for a wide variety of liquids in quantities from 600 to 4,000 gallons—just one of the many and varied services British Road Services render to Trade and Industry.



If you find transport something of a problem . . .

Ring  **British Road Services**  
— the best link between dispatch and delivery





## ROAD VEHICLE INDUSTRY

### Plastics Tipper by Holmes

STRUCTURAL plastics have now emerged as an established material of construction for road vehicle coachwork but so far, despite the acknowledged advantages of strength with lightness, durability and corrosion resistance, few complete plastics commercial vehicle bodies have appeared. Now, Holmes (Preston), Limited, has introduced a large-capacity tipping body constructed entirely of glass fibre-reinforced plastics which offers the usual advantages as well as great flexibility of production and application. It can be produced in a wide range of sizes and in various depths to suit individual requirements and, due to its double-skin design, can conveniently be insulated when necessary. Fothergill and Harvey

Lane, London, N.W.10. Reference to the different products, which include fixed, sliding and hinged windows, sliding doors and gear, balances, louvres and door handles is facilitated by thumb indexing and all future sheets issued will be punched for insertion in the appropriate sections. Identical-style catalogues dealing with specific products for railway and marine applications are also available.

#### Increased Kenex Production

MORE than double the present output will be possible when a new factory now being built for Kenex, Limited, is brought into production, probably next month. The new factory covers a ground area of about 35,000 sq. ft. on a site extending to several acres on the outskirts of Dover. It will be recalled that Kenex recently introduced the Kenecoach, a 12-seat conversion of B.M.C. or Ford Thames 12- and 15-cwt. vans conforming to the amended p.s.v. requirements (described in MODERN TRANSPORT for May 10).

#### Vauxhall Motors Record Month

DESPITE the recent dock strike, Vauxhall Motors, Limited, shipped more vehicles abroad in June than ever before in a single month. The new record figure of 10,914 vehicles exported compares with a previous best of 10,666 last January. Production was also at the new high level of 18,394—almost a thousand more than in any previous month—of which 5,294 were Bedford vans and lorries. The Bedford is now the best-selling commercial vehicle in Australia, which was second in importance to the United States among the 100 countries to which Vauxhall Motors exported in June.

#### Silicone Waterproofing Compound

MANY useful applications on transport vehicles for MS4 silicone compound are described in a leaflet now available from Holiday and Hemmerdinger, Limited, 71 Ardwick Green North, Manchester, 12, distributor for the product in North-West England and North Wales. MS4 is a smooth silicone grease with good electrical insulating and waterproofing properties stable from minus 50 to plus 200 deg. C. Its particular uses in transport include the treatment of ignition and electrical systems to prevent leakage due to dampness, lubrication of cables for assembly in harness or conduit and on machined surfaces and gaskets to prevent corrosion and sticking.

#### Mixture Distribution Modifier

NOW available from Motortune, Limited, Jay Mews, London, S.W.7, for most petrol-engined commercial vehicles is the G.M. Manifold Modifier, a device designed to improve performance and petrol economy that has been extensively fitted to car and motorcycle engines during the past four years. The G.M. Modifier, which is manufactured by the G.M. Carburettor Co., Limited, Knutsford, to the design of Mr. G. A. Mangoletsi, in a flanged venturi fitted between the carburettor and the induction manifold. Its object is to pick up and redirect in atomised form into the middle of the mixture stream passing into the manifold the liquid fuel that has condensed on the walls of the carburettor body after passing the throttle valve. Recondensation on the manifold walls is largely obviated by a small air bleed admitted on the engine side of the modifier. The device costs up to about 30s. and is supplied under unconditional guarantee of satisfaction. Descriptive literature is available from Motortune, Limited.

#### Deans Bus Doors Policy Change

EFFECTIVE on July 1, a policy change by Deans and Son (Yorkshire), Limited, transferred the sales of bus doors to the company's associate Redro, Limited, Grovehill,



A picture taken during our recent road test of the new Dodge six-tonner showing the well-positioned cab steps and handgrips

Beverley, Yorks. The change has been necessitated on purely domestic grounds and there is no change otherwise, all staff concerned with the development, production, sales and servicing of bus doors having been transferred from the Deans to the Redro payroll. The only effective change therefore is that all new business will be conducted and any business in hand at July 1 completed under the name of Redro. Customers with outstanding business on July 1 will have been notified of the change.

#### New Beclawat Catalogue

HANDSOMELY restyled in new covers and binding, a new trade catalogue of Beclawat road transport windows and other equipment is now available to interested persons from Beckett, Laycock and Watkinson, Limited, Acton



Tyglas plastics tipping body and cab by Holmes (Preston), Limited, on E.R.F. chassis

Tyglas materials have been employed and the inner and outer mouldings bonded together are carried on Homalloy light-alloy extruded sections. The top-hinged taildoor is also of plastics, fitted in a Homalloy frame. The body illustrated has a capacity of 12½ cu. yd. and internal dimensions of 12 ft. 6 in. by 7 ft. 2 in. and depth of 4 ft. It weighs only 9 cwt. and can be fitted to any type of tipper chassis. The high exterior finish and clean angle-free interior will be noted.

#### Progrege Anti-Friction Process Deal

BACKED by six of Germany's big engineering concerns, three new companies are to be formed to exploit the Progrege anti-friction process respectively in Germany, Europe (except



A general view of the exhibits at the recent Austin commercial vehicle exhibition at Longbridge

Britain) and the world. Progrege, Limited, Dundee, will retain the British rights in the process (originally named Promac and reported in our issue for July 13, 1957) and will have a 50 per cent interest in the world-rights company.

#### Commercial Motor Show

OFFICIAL opening of the 1958 Commercial Motor Show (Earls Court, September 26—October 4) will be performed by Mr. Harold Watkinson, Minister of Transport and Civil Aviation, at noon on Friday, September 26.

#### Shutter Door Catalogue

VARIOUS types of sliding and roller shutter doors and collapsible gates designed for garages and other industrial buildings, as well as tracks, locks and latches are described and illustrated in a new brochure published by G. Brady and Co., Limited, Manchester, 4.

#### New Leyland South African Agency

MORE extensive sales and service facilities for Leyland, Albion and Scammell vehicles over a very large area of South Africa will result from an agreement concluded between Leyland Albion (Africa), Limited, and Rauhs Diesel Service (Pty.), Limited, Upington. The new agency, which is said to have the best-equipped workshops in the area, will serve the extensive Gordonia, Kenhardt and Prieska territories.

#### Another B.M.C. Mobile Diesel School

FOLLOWING the success of its mobile service school which recently undertook an initial 3,500-mile tour of South Africa, the British Motor Corporation is equipping a second vehicle as a diesel school. The van will carry certain selected fuel-injection servicing equipment manufactured by Leslie Hartridge, Limited, and will operate throughout the British Isles and instruct mechanics in all branches of diesel vehicle repair and maintenance.

## BARIMAR'S "Crowning" Achievement

Repairing the Broken Head of a 900-ton Press

There is something more to the repairing of broken machinery than the actual welding of the damaged parts. Not only must the welding be first-class; but the repair must be completed in such a way that the original strength of the member is fully restored and increased if possible. That is a cardinal principal of the Barimar Service.



What a test for BARIMAR Scientific Welding

BROKEN CROWN OF GIANT PRESS that carried a load of 900-tons

Here, for example, is the crown of a 900-ton press. It came to Barimar broken in half, one large bearing housing having been severed from the main body. A key machine, it had been subjected to tremendous strain, so that the crown had to be repaired by the Barimar Experts in such a way, that its strength was above all question. The big housings were restored to perfect alignment, otherwise the enormous load would not have been evenly distributed when the Press was in action again. Working day and night Barimar completed the repair within a few days, for the breakdown had brought a vital department to a standstill. The crown was stronger than ever, and the repair was returned to the owners, tagged with the famous Barimar Money-Back Guarantee — hallmark of first-rate workmanship.



after repair by Barimar. The Crown is as strong as ever. The repair was completed in less than a week, covered by the Barimar Money-back Guarantee and was worth thousands of pounds to the owners. ALL BROKEN PARTS which are transportable must be sent CARRIAGE PAID or delivered to the nearest Barimar Branch. Please remove all fittings and post letter advising dispatch.

## BARIMAR LTD.

Barimar House, 22-24 Peterborough Road, FULHAM, LONDON, S.W.6  
Telephones: RENown 2147-2148, Night 2148  
Telegrams: "Bariquamar, Walgreen, London"

#### BARIMAR BRANCH ADDRESSES:

BIRMINGHAM, 12: 116-117 Charles Henry Street. Telephone: Midland 2696  
MANCHESTER, 13: 67 Brunswick Street, Ardwick. Telephone: Ardwick 2738  
NEWCASTLE UPON TYNE: 64-66 The Close. Telephone: 21055  
GLASGOW, C.2: 134 West George Lane. Telephone: Central 4709

BARIMAR—The World's Scientific Welding Engineers

## MOTOR TRANSPORT REPAIRS

Most Breakages to Motor Parts can be Repaired by Barimar at a Big Saving on the cost of New Parts.

**CYLINDER BLOCKS:** Every kind of crack and fracture, broken bores, scored bores, damaged stud housings, cracked, burst, pitted and sunken valve seatings.  
**CYLINDER HEADS:** Broken and cracked heads, cracked and worn valve seats, chipped, warped or damaged faces, broken rocker standards, defective camshaft bearing housings, cracked stud-holes, stripped plug threads. IRON OR ALUMINIUM.  
**CRANKCASES:** Fractures caused by broken connecting rods and run big ends, broken-off bearing arms, smashed sumps, cracked stud housings, broken bearing and flywheel housings, stripped drain-plug threads. IRON, ALUMINIUM OR ELEKTRON.  
**CRANKSHAFTS:** Broken across web or journal, cracked, scored, threads stripped, splines or tapers worn.  
**TRANSMISSION:** Cracked or broken gearbox and axle casings, damaged gear teeth, worn splines and tapers, fractured shafts, cracked differential casings.

## They build durability at Fort Dunlop



### DUNLOP ROADTRAK MAJOR

Deep, self-clearing shoulder bars for positive grip on loose, earthy ground and deep ribbed centre tread for maximum mileage on the road ensure top performance for on-and-off the road service.

with Science,  
Accuracy  
and Experience

Even though thousands of tyres are made at Fort Dunlop every day, they are not mass produced. Every Dunlop tyre is individually built. It is the work of experts—working as a team and supported by the most modern machinery, materials and methods. Every Dunlop tyre is built to give you a high standard of performance in terms of mileage, safety and comfort, in fact, complete confidence to meet every driving condition.

**DUNLOP**

built better  
to last longer!

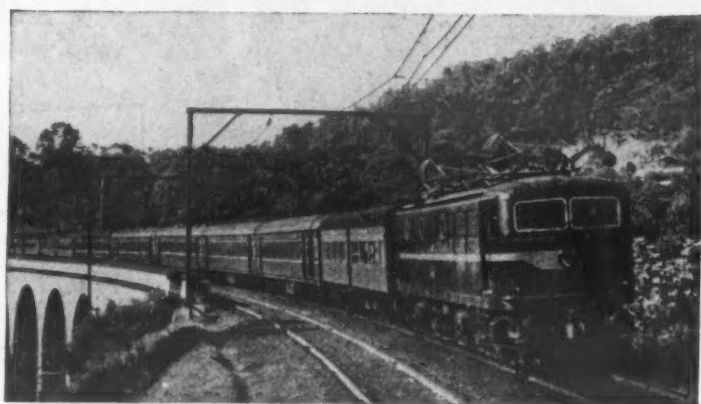


## ELECTRICAL EQUIPMENT for ROAD AND RAIL



Over 3,000 trolleybus electrical equipments have been supplied by Metropolitan-Vickers—the photograph shows one of the new fleet of Ashton-under-Lyne trolleybuses fitted with Metrovick equipment.

by METROVICK



Railway installations have been supplied for all parts of the world—the illustration shows one of 40 straight electric locomotives supplied to the New South Wales Government Railways.

METROPOLITAN-VICKERS

ELECTRICAL CO. LTD. TRAFFORD PARK, MANCHESTER 17

An A.E.I. Company

K/V704

## NEWS FROM ALL QUARTERS

### New Cross Gate—Marlow Excursion Train

A ramblers excursion train has been arranged from New Cross Gate to Marlow for Sunday, August 3, via Aldgate East, Moorgate (Met.) and Kings Cross (Met.) thence via Maidenhead, returning via High Wycombe. The organiser is Mr. G. R. Lockie, 36 Harold Road, London, S.E.19, the throughout fare 8s. 6d. return, with certain intermediate fares.

### Arrival Still More Assured in Scotland

Following on the success of the assured arrival service introduced in April from Glasgow to Aberdeen and Dundee, the Scottish Region of British Railways has decided to extend this facility to Elgin and Inverness. This will bring to the North of Scotland two additional express freight services within the past few weeks. Nearly 35,000 consignments have been carried successfully on the assured arrival service since its inauguration.

### First Parking Meter Scheme Starting

The Mayfair parking meter experiment commenced this Thursday, July 10. Between the hours of 8.30 a.m. and 6.30 p.m. from Monday to Friday motorists will be entitled to park only at a parking meter and upon payment of a fee. Elsewhere in the zone parking will generally be prohibited. Lorries and vans will still be free to load and unload (gaps are left between groups of meters for this purpose) but not at specified street junctions which will be marked by yellow lines. On Saturdays motorists may park only at parking meters but they can do so free of charge.

### E.A.R. Development Programme 1958-60

Having regard to the limited availability of capital funds and the fact that in general the present capacity of East African Railways and Harbours services is more than sufficient to meet current traffic demands, it is now considered that the use of capital funds should be reserved for works which would produce economies in working and would safeguard the net revenue position in future years. Works required to replace and improve existing equipment or facilities in order to provide for the future or for social services such as housing or clubs designed to ensure a contented staff would also be favoured.

### Euport Project Commenced

Speaking on the occasion of the inauguration by the Netherlands Prime Minister, Dr. Drees, of the first stage of the Euport project, the director of the Rotterdam Municipal Port Authority, Mr. N. T. Koomans, pointed out that postwar industrialisation in Western Europe had resulted in an increasing use of steel and of industrial power, which had in its turn led to greater imports of ore, oil and American coal. The use of large ships cut transport costs considerably, and it was in realisation of this fact that the great expenditure involved in the Euport project had been decided upon. The new harbour would be accessible to ships with a deadweight of up to 70,000 tons and a draught of 42 to 43 ft. by 1961. Four years later ships of 80,000 and even 100,000 tons with a draught up to 48 ft. would be able to use it.

### Leningrad Underground Extended

A new section of the Leningrad Underground was opened to traffic on June 1. It runs under the River Neva, from Uprising Square near the Moscow railway station to Lenin Square near the Finland railway station. The city's five railway stations are now linked by the underground railway.

### One-Way Traffic at Hammersmith

The one-way traffic scheme for Hammersmith Broadway, arising out of the construction of the Great West Road—Cromwell Road link will come into force on July 13. It involves diversion of London Transport bus, coach and trolleybus routes via a new north—south slip road joining Hammersmith Road and Great Church Lane. The Broadway itself will now carry traffic only in the west—east direction. An exit from the Great Church Lane footbridge over Hammersmith Station (District and Piccadilly lines) will be provided to serve bus stops in the new slip road.

### Channel Tunnel Studies to Commence

The Channel Tunnel study group has now awarded three contracts for technical investigations. These go to the Economist Intelligence Unit, the Société d'Etudes Techniques et Economiques de Paris, and de Leuw Cather and Company, of Chicago. These three groups will undertake a detailed study of actual and potential cross-channel traffic, and of the development of commercial, passenger and freight traffic which might be expected to follow the construction of a cross-Channel road and/or rail link. The study is expected to take a year to complete.

### Continental Railway Engineers at Notting Hill

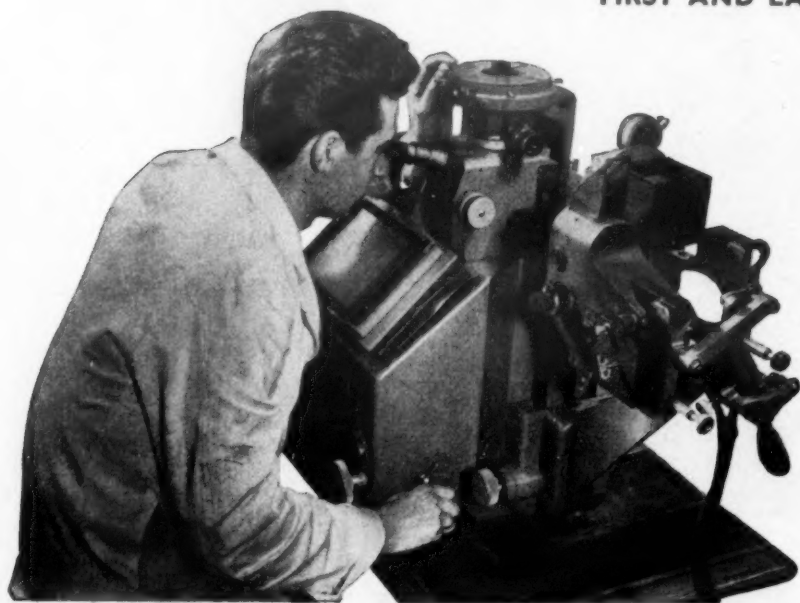
A party of prominent French, Belgian, German, Swiss and Italian railway engineers visited the reconstruction of the London Transport Notting Hill Gate Station on June 30. The visitors were escorted over the works and escalator shafts by Mr. H. G. Follenfant, new works engineer, London Transport, and Mr. L. Drain, resident engineer at Notting Hill Gate for the consulting engineers, Messrs Mott, Hay and Anderson. The visitors expressed great interest in all they saw and asked a great variety of questions.

### Australian Roads Campaign

The Australian Road Federation has drawn up an operational plan applying to all regions to bring about improvement of the national road system. It emphasises that a new approach to the road question is called for; at present states have the constitutional responsibility for road development but it is beyond their financial resources. The Commonwealth, on the other hand, has no constitutional powers regarding roads but augments state road building funds with an annual grant. The A.R.F. urges therefore that the Commonwealth assume entire financial responsibility for arterial roads, financing this from existing revenue taxation on motor vehicles and associated products, from consolidated revenue and from specific loan funds. The States would devote existing federal road grants and state road taxation revenue to the development of intrastate secondary highways and other roads.

## Precision

FIRST AND LAST



## Pressed Steel

In the last ten years, Pressed Steel have produced enough railway wagons to make a train 300 miles long. Wagons of all kinds and all gauges for home and overseas. But sheer capacity—the ability to meet big orders and meet them quickly—is only half the story. The other half is just as important, even though it cannot be expressed in statistics—the finish, the painstaking attention to detail, the skill and experience of the men you see here.

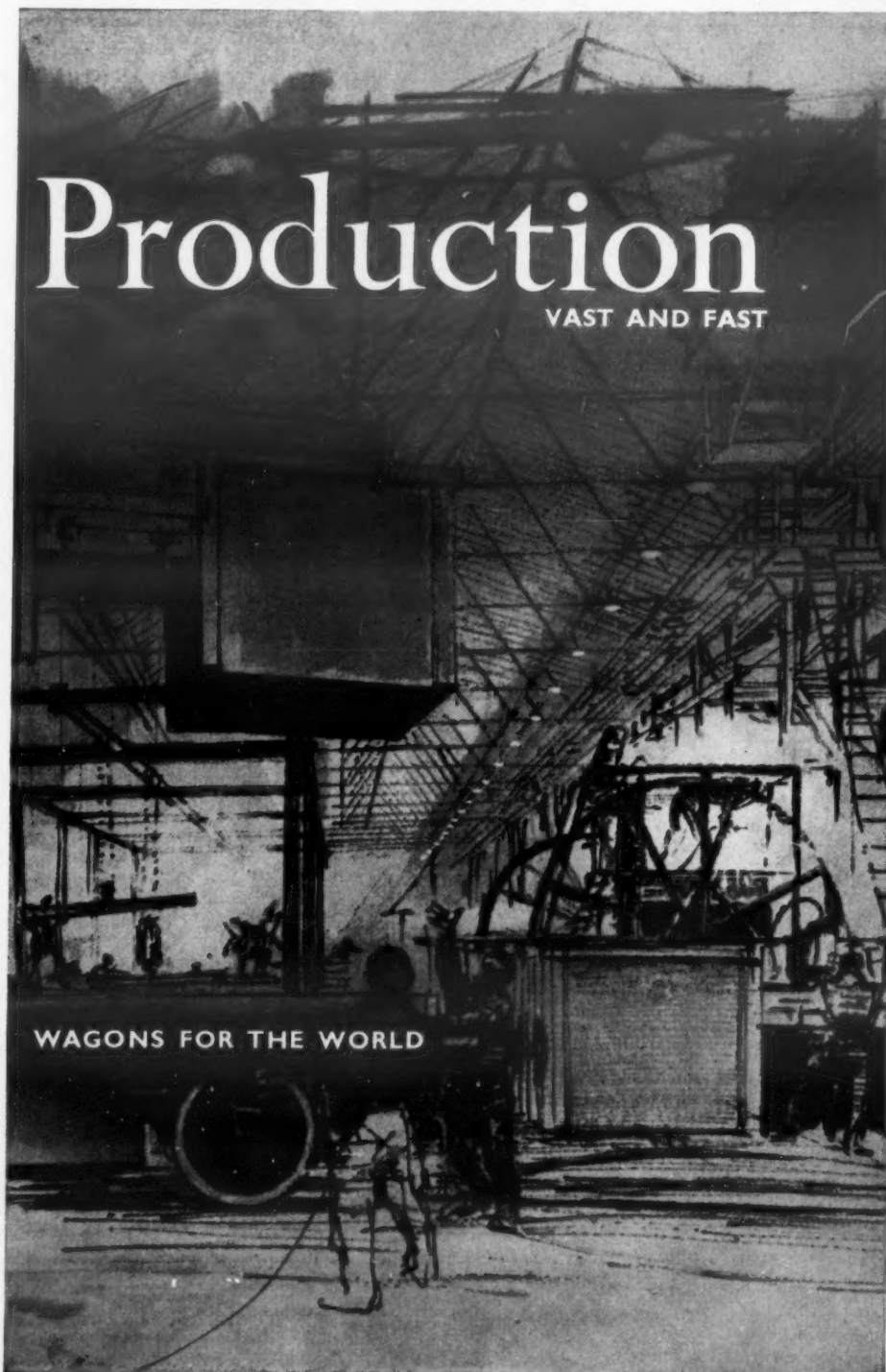
**PRESSED STEEL COMPANY LIMITED**

Railway Division: Paisley, Scotland. Head Office: Cowley, Oxford. London Office: 169 Regent Street, W.1.

Manufacturers also of Motor Car Bodies, Prestcold Refrigeration Equipment and Pressings of all kinds.

## Production

VAST AND FAST



WAGONS FOR THE WORLD



## COMMERCIAL AVIATION

### First Flight of Bristol 192

#### GHANA AIRWAYS FORMED

THE turbine-powered twin-engined Bristol Type 192 helicopter made its first flight on July 5, at Bristol Aircraft Weston Division. Piloted by Mr. C. T. D. Hosegood, the chief helicopter test pilot, the flight consisted of a number of hovering tests, the first of a series which will be carried out during the flight test programme. The Type 192, which is now in production for the Royal Air Force, has been designed to meet Service requirements for troop and freight transport, ambulance duties, and search and rescue operations. Powered by two Napier Gazelle free turbine engines each of 1,300 s.h.p., the helicopter has a maximum all-up-weight of 18,000 lb. and a cruising speed of 120 knots. The cabin length of 24 ft., coupled with the wide centre-of-gravity range, allows for the design of a variety of internal layouts to meet different operational demands. In a freight role, the aircraft carries a maximum concentrated load of 4,000 lb. or, alternatively, a maximum distributed load of 6,000 lb.

#### B.O.A.C.-Cambrian Connections

Following an agreement between the British Overseas Airways Corporation and Cambrian Airways, B.O.A.C. passengers to the United States or Canada from Wales or Western England can now fly to join the B.O.A.C. service at Manchester from either Cardiff or Bristol at the fare which is applicable from Manchester only. This saves the passenger not only time but money. Cambrian Airways services from Cardiff and Bristol provide good connections with B.O.A.C. night flights from Manchester to New York and to Montreal and with B.O.A.C. daylight flights from Manchester to New York. Cambrian Airways allows its passengers the full transatlantic free baggage allowance, according to class.

#### Canadian Air Traffic Report

Canada will not be ready for internal airline competition until about 1966, according to a report by Mr. Stephen Wheatcroft, the British air transport consultant, published in Ottawa recently. He recommended that the Canadian Government should subsidise airlines to provide services to what he called "unprofitable but socially desirable areas." The report said that at the present time only the Toronto-Montreal, Vancouver-Victoria and Toronto-Winnipeg routes could sustain a competitive service without an increase in costs. An increase in aircraft size would cope with an increase in volume of traffic until 1961. After that year, however, the position seemed to improve since there was likely to be some stabilisation on the rate of growth of aircraft size, and by 1966 it appeared that at least 11 of the transcontinental sectors would have a traffic volume adequate for competition. After making his final suggestion for Government subsidies for some routes, Mr. Wheatcroft said in his report: "There is the strongest case for believing that direct subsidy is preferable to internal cross-subsidisation." A review of Government policy towards that local and regional service was urgently needed. The report was requested by the Minister of Transport, Mr. George Hees.

#### JetStar Circuit of U.S.A. in 18 Hours

A Bristol Orpheus-powered Lockheed JetStar transport recently completed a demonstration flight around the United States of America in what is believed to be a record total time of 18 hr. and a flying time of only 15 hr. Taking off from Edwards Air Force Base in California, the JetStar flew north over the western states of America to make its first stop in the state of Washington, headed east to make a second stop in Massachusetts, and then flew south over the eastern seaboard to make its third stop in Florida. Eighteen hours after departure, the aircraft returned to the base, having made a complete circuit of the U.S.A. in 15 hr. flying time at an average speed of 385 knots (440 m.p.h.). This utility transport is powered by two Bristol Orpheus engines. The first prototype was completed in the record time of 30 weeks and made its first flight on September 4, 1957. Orpheus engines were initially fitted to bring forward the first flight date, and it had been expected that the Lockheed Aircraft Corporation would offer the JetStar for sale in a twin-Orpheus version as an alternative to the planned four-engined version with American engines of lesser power. Bristol Aero-Engines, Limited, has an agreement with the Curtiss-Wright Corporation under which a jointly developed derivative of the Orpheus will be manufactured in the United States under the designation TJ-37 as the production engine for American-built aircraft.

#### Ghana Airways Formed

Ghana Airways, Limited, was incorporated in Accra with a nominal capital of £400,000 on July 4. The formation of the company followed several months negotiations between the Government of Ghana, which has subscribed £240,000, 60 per cent of the capital, and B.O.A.C. Associated Companies, Limited, which has subscribed the remaining 40 per cent, £160,000. An agreement has also been signed shortly between Ghana Airways and the British Overseas Airways Corporation covering the operation of international air services with aircraft on charter from B.O.A.C. Ghana Airways will be controlled by a board of directors consisting of a chairman and two directors appointed by the Ghana Government and two directors appointed by B.O.A.C. The executive running of the airline will be the responsibility of a general manager, who will be answerable to the board of directors. The training of Ghanaian nationals to take over the management, administration, flying and engineering sides of the airline is to be undertaken by B.O.A.C. Associated Companies at the expense of Ghana Airways. In the first place, however, a number of Europeans employed by B.O.A.C. Associated Companies will be seconded to Ghana Airways. The new company plans to begin international services on July 16 with a once-weekly Stratocruiser service to London and to take over all the existing domestic and some of the regional services from W.A.A.C. on or about October 1. B.O.A.C. operates four times weekly between Accra and London and as traffic increases it is planned to increase the number of Ghana Airways services until parity is reached with B.O.A.C.

## N.E. REGION TRAFFIC REORGANISATION



*F. C. Margetts*

Mr. F. C. MARGETTS, M.B.E.

.....

Having been appointed chief traffic manager, North Eastern Region, British Railways, at the beginning of this year, following the transfer of Mr. Frank Grundy to the British Railways Central Staff as chief traffic officer, Mr. Frederick Chilton Margetts was subsequently made assistant general manager (traffic) under the further reorganisation of the region's traffic department. He now has, as already indicated in MODERN TRANSPORT, overall responsibility for the commercial, operating and motive power departments of the region. Genial, friendly and competent, Mr. Margetts has shown clearly his appreciation of the need for a modern commercial outlook on the railways and for technical aids to the provision of first class competitive service to traders and the general public. He joined the service of the London and North Eastern Railway in 1923, and after gaining experience at various stations became a traffic apprentice through competitive examination in 1927. After experience in staff work, and particularly in connection with the introduction of incentive schemes, he was appointed assistant goods agent at Monkwearmouth in 1936. Two years later he was appointed head of the trains section of the locomotive running superintendent's office at York, a post which he vacated towards the end of that year to take charge of the joint freight trains section under the direction of the superintendent and locomotive running superintendent, North Eastern Area. Mr. Margetts went to the Southern Area of the L.N.E.R. in 1943 as trains assistant to the operating superintendent, and he was transferred to Scotland in 1945 as district superintendent, Burntisland. In the following year he became assistant superintendent, Scottish Area. In 1949 he was appointed assistant operating superintendent, Scottish Region and, following the death of Mr. James McCreddie in 1955, he became chief operating superintendent of that region. He received the M.B.E. in 1943 for his work in connection with railway development.

## IN PARLIAMENT

### New Attack on P.S.V. Fuel Tax

#### CHANCELLOR APOLOGETIC

DURING the committee stage of the Finance Bill on July 2, Mr. F. McLEAVY brought up a new clause to exempt from all tax diesel fuel used in public service vehicles. The present rate of tax on diesel fuel is 233 per cent and, said Mr. McLeavy, is equivalent to 24d. to 3d. per bus mile. The Chancellor of the Exchequer, Mr. D. HEATHCOAT AMORY, said that, frankly, the main reason why he had done nothing in this direction in the present Budget was that he could not afford the loss of revenue. The exemption proposed would cost £28 million for diesel oil alone, but it "would be extremely unlikely to stop there." The goods vehicle operators would produce a strong case. Mr. Amory said he would not dispute the facts or figures put forward in support of the p.s.v. industry proposal. He suggested that the tax should be considered in relation to fares, when it would be 14 per cent.

The other proposal, that the tax might be spread over all users of hydrocarbon oil would mean a duty of 1s. 1d. per gal. and, he submitted, would result in a doubling of the price of heavy oils used in agriculture and industry. It would also result in a tax for the first time on domestic kerosene. He could not forecast what his future plans might be, but recognised that the present rate of tax was a very heavy charge.

## DOCK LABOUR TROUBLES

### Arbitration Not Wanted

UNION rejection of the possibilities of arbitration is the latest feature of the wages claim for dockers. The claim was first submitted by the unions on April 11. The four concerned are the Transport and General Workers, Scottish T.G.W., the General and Municipal Workers and the Watermen, Lightermen, Tugmen and Barge-men. The port employers have since twice rejected the application without making a counter offer and the unions reported the deadlock to the Ministry of Labour, pointing out that rises of 3 or 4 per cent had been decided upon in many other industries whereas they were offered nothing. On June 27 the employers saw the Ministry and explained their reasons for rejection. Mr. T. Claro, the chief conciliation officer, passed this information to the unions on July 7. Mr. T. O'Leary, national docks group secretary, T.G.W.U., then expressed keen disappointment; a national docks conference would be called and although they did not want a strike they were determined to get an increase. They had been very conciliatory, he said, but he ruled out arbitration as a way out of the impasse.

In May, 1957, a 5 per cent wage increase for dock workers was brought in. The basic minimum wage is £8 2s. 3d. for a 54-day week but actual earnings are considerably in excess of that figure. As we indicated some time ago, the United Steamship Company of Denmark has diverted one of its four ships on the London service to Harwich because of the frequent incidence of disputes which hold up shipping in London.

## SOUTHERN REGION STORES

### Reorganisation

AS from July 1, 1958, the Stores Department of the Southern Region of British Railways has been renamed Supplies and Contracts Department, and Mr. R. L. P. Cobb, the present stores superintendent, has been redesignated supplies and contracts manager. In connection with this change, Mr. W. Featherstone, who was assistant stores superintendent, has been appointed supplies officer, and the following appointments in the new organisation are also announced:

Mr. J. B. Owen	Contracts officer
Mr. H. W. Ralph	Assistant (purchases and sales)
Mr. J. H. Drinkwater	Assistant (indoor)
Mr. A. W. Enticott	Assistant (outdoor)

Under the new organisation the department will be divided into two sections. One under the supplies officer will cover the existing functions of the stores department, and the other under the contracts officer will take over the business of dealing with contracts for works.

## ENGINEERING PRODUCTS

### Goodyear Division

FORMATION of a new division named Engineering Products Division is announced by the Goodyear Tyre and Rubber Co. (Great Britain), Limited. The new division will take over the further development, manufacture and testing of Goodyear industrial disc brakes and Goodyear Ausco double-disc brakes, which have hitherto been handled by the Aviation Products Division. A further function will be the handling of contract work for which comprehensive precision machining, fabrication, assembly and testing facilities are provided. This is a service provided by manufacturers who require additional production in the light engineering category and for companies that wish to market items which they do not have adequate facilities to produce.

The factory equipment provided permits manufacture to A.I.D. or A.R.B. approval in addition to normal commercial standards, and is particularly well suited to major production orders for mechanical, electro-mechanical and hydraulic devices, although not necessarily restricted to these types of articles.

Mr. C. J. Palmer, managing director of J. Spurling, Limited, has been appointed to the board of the parent company, Transport Development Group, Limited. He is a director of 10 of the group's subsidiaries.

Mr. D. A. Strickland has been appointed ocean travel manager of Thos. Cook and Son, Limited, to succeed Mr. C. M. Squarey, who relinquished the position on July 1 in order to take up his appointment as general manager of the newly created shipping owners' organisation known as Ocean Travel Development. Mr. J. E. Shepherd succeeds Mr. Strickland as assistant traffic manager and Mr. L. F. Olney becomes assistant traffic manager (agents). Mr. J. W. P. Phillips, branch manager, Gracechurch Street, succeeds Mr. Olney as controller Home Counties and Ireland area.



## Tenth Anniversary of Cars by Air

(Continued from page 3)

Ferryfield but, before that, mention must be made of the booking organisation centred on London. Until its recent transfer to Silver City House at 62 Brompton Road, it was working in offices which became increasingly congested as traffic grew. The move has made it possible to spread out and an interesting result has been that the permanent staff has been able to cope with all the bookings, despite the marked increase that there has been this year. This has undoubtedly been due in part to the fact that people are booking further ahead, but the ability to move around and the easier access of records has greatly simplified the task as well as safeguarding the system against errors.

### Reservations

Reservations are received through travel agents, through the motoring organisations and directly from the public and are duly recorded. Coloured cards are used to distinguish between the various routes and these are mounted on stands so that the situation for any day can be surveyed at a glance, the cards being divided into sections and filled in appropriately as the space is booked up. Almost all bookings are provisional in character, and the notification embodies the date by which the fares should be remitted. If this condition is not fulfilled then, save in very special cases, the space is released. The manner in which the cards are marked off depends, of course, upon the type of car for which the reservation has been made and most of the staff would emerge successfully from any examination on the subject having reached the point of knowing the dimensions by heart. On occasion, of course, the potential user confuses the issue by giving the wrong year when there has been a variation in the dimensions of a model just at that critical period, but these matters sort themselves out at the airports, if not before, since the vehicle load for any flight is assembled head to tail and needs to come within certain marks for overall length and, if it comes to that, also for overhead clearance.

In due course the cards are removed from the stands and assembled in trays in flight order, together with other relevant material, and then, at the appropriate moment, all is released to the appropriate airport. Thereafter the responsibility for seeing that all goes smoothly and that, in the event of failure to report, the best use is made of any space that becomes unexpectedly available lies locally. This is where that appreciation of the virtues of flexibility to which we referred earlier becomes especially valuable. On a recent Saturday when Lydd was handling 65 car ferry flights and 27 passenger services the whole operation was proceeding most smoothly until Le Touquet suddenly found that the Tour de France bicycle race, which moves Frenchmen to ecstasies and impels British motorists towards chronic alcoholism, was preventing cars from reaching the airport if they were approaching from east of the route. Quick improvisation enabled several travellers who had arrived early—five hours so in one case we saw—to proceed almost immediately and adjustment in the flow of aircraft meant that the maximum available number was

leaving Le Touquet in the period when the flow of cars was resumed.

It should not, incidentally, be thought that absence of booked cars necessarily involves empty or part-empty flying. Contracts are held for flying new cars from Britain for delivery on the Continent and, in the reverse direction, for moving the stocks of new Renault and Peugeot cars which is always building up at Le Touquet Airport ready for flying to Ferryfield.

### Passenger Aircraft

There are normally 11 Mark 32 Freighters for car ferry work, of which two are based at Southampton for the services to Cherbourg and Deauville and the remainder are at Ferryfield. One serves as standby aircraft for both Ferryfield

Touquet it is the practice to park the aircraft on the apron away from the area used by the ferry service and this also obviates complications. When the extension of the buildings at Le Touquet is complete it will be possible to achieve a greater degree of segregation for Lydd-bound passengers and this will be a benefit, but, in fact, many of the shorter inclusive-tour flights are to Ostend where passenger-handling space has been improved and where a second terminal building is now under construction. When inward passenger services arrive at Ferryfield the coaches are parked near the exit from customs so that passengers can proceed straight to them unless, as is sometimes the case, arrangements have been made for a meal in the restaurant or refreshments before they leave.

Most of the coaches for the inclusive tours and also, of course, those for the Silver Arrow service are provided by the East Kent Road Car Co., Limited, and Silver City has always found this operator particularly helpful and enterprising. An inspector is stationed at the airport and he is provided with a prewar Leyland Tiger TS8 coach

with London and Ferryfield. On both sides of the Channel the airport has the advantage of adequate roads suitable for large vehicles.

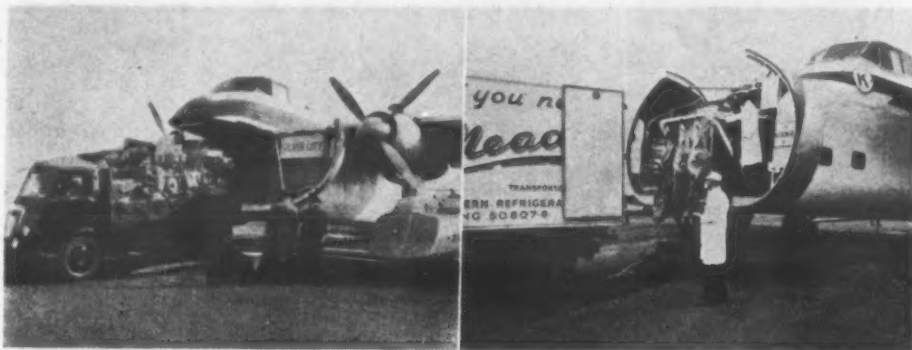
There are also special flights for freight and it should perhaps be mentioned that unaccompanied cars such as those for export and import fall within the freight category. Excellent relations are enjoyed with both British and French hauliers and some of the latter have moved loads from Le Touquet to Germany and Switzerland to name but two countries. It is, however, a matter for some doubt whether, despite very strenuous endeavours by sales staff, there is as wide an awareness as there should be of the benefits of this service on the grounds of both economy and speed. It is possible for bulk consignments from London to Paris or, for that matter, in the reverse direction to complete the journey in under 24 hr. while it is practicable to achieve three-day delivery from almost anywhere in Britain as a matter of course.

Large indivisible loads up to 4,500 kg. or small parcels can be carried. Normally, the maximum floor loading is 200 lb per square foot for a distributed load, but this can be exceeded by prior arrangement. Perishable traffic cannot be carried on this service. The Bristol Freighter Mark 32 aircraft used on this service have a large unobstructed hold served by fully opening nose doors which give a clear entry 6 ft. 8 in. square. The aircraft has a hold length of 40 ft. 6 in., but can carry articles up to 50 ft. in length by special arrangement—this involves removing the passenger cabin at the rear of the aircraft.

### Engineering

When Ferryfield first opened there was no hangar accommodation but this has since been provided and the engineering department at Ferryfield now carries out all checks up to and including check 4. Beyond that stage work is still carried out at Blackbushe. With the peak periods coming at weekends so far as vehicle and passenger work is concerned, every effort is made to complete work by the Friday of any week and when we looked in recently there was only a Dakota there. Work is now, as it happens, being reorganised so that the engineering staff work on a five-day week basis and 24-hour day with three eight-hour shifts. The hangar has been designed with the Bristol 170 in mind so that the tail of the Mark 32 just clears the door and the roof centre and its wing tip clears the offices and stores which run along one side of the building.

The future of Silver City Airways would seem assured for many years to come and it seems to us that the most doubtful point is likely to be the ability of Ferryfield, admirable little airport though it is, to cope with all the traffic. As it is now there are movements every five minutes or less during the summer and this year's growth in traffic, while absorbed to some extent by higher load factors, nonetheless involves more movements and this must surely be a portent for next year and its successors. As to aircraft types, there is every reason to expect several more years of service from the Bristol 170s and thereafter it may well be that there will be a turbine-powered replacement, despite the relative shortness of the routes. The A.W.650 could be the answer here or, looking a little further ahead, the Fairey Rotodyne. Meanwhile this independent airline can feel well satisfied at preserving its individuality without impairing the success of its pioneering enterprise.



Typical freight loads carried by Silver City include machinery and, right, meat bound for France and carried on special racks evolved by the airline

and Southampton and the other eight ply steadily to and fro between Ferryfield and Le Touquet or Calais and Ostend. Passenger services are provided by Mark 21 Freighters seating 44 and the converted Mark 32s which have already been mentioned and by Douglas Dakotas. Normally, although there is no absolute hard-and-fast rule, the longer flights are made by the Dakotas and the shorter hops to Ostend or Le Touquet by the Freighters. Last year there was a Silver Arrow service between London and Brussels via Ostend as well as the London-Paris facility, but an assessment of the aircraft situation this year led to a conclusion that its revival would, for the time being, overtax the aircraft situation. This judgment has, indeed, been justified and it has been found necessary to charter an additional Dakota from B.K.S. Air Services, while on the last occasion that we visited Ferryfield there was also one from Transair.

The arrangements for the inclusive tour traffic and the Silver Arrow flights go very smoothly. The separate building has the effect of keeping the passengers apart from those on the car ferry and it is only when it comes to outgoing formalities that they are moved forward to the main terminal building. Both at Ferryfield and Le

which is parked permanently near the passenger building. There is also a regular East Kent service from the airport to Hythe and Folkestone on which the first and last journeys are specially timed to suit workers at the airport, while at summer weekends there is a bus service from Rye via Camber and Lydd Camp.

### Roadair

The Roadair service of Silver City really calls for separate treatment, but it would not give a balanced picture of operations if no reference was made to it. This operation has developed remarkably since the airline moved to Ferryfield as will have been gathered from the traffic figures set out earlier. Earlier this year the rates were reduced and freight may be consigned from the Silver City freight depot in London to that in Paris at a rate of 8d. per kg. up to 250 kg., with a minimum charge of £2, at 7d. a kg. from 251 to 500 kg. and at 6d. a kg. thereafter. Rates from Lydd to Paris are 1d. a kg. less and from London to Le Touquet they are 2d. a kg. less. Arrangements are made at each end for the further conveyance of consignments if required and plans are advanced for the establishment of further Roadair depots in Britain which will be linked

## LOOK FORWARD TO Rotodyne TRAVEL



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A new conception in aircraft design has

brought this kind of travel into plain sight—the Rotodyne, which is neither aeroplane nor helicopter, but something of both, and is the world's first Vertical Take-off Airliner.

Note that it conforms to the safety standards internationally recognised for twin-engined fixed-wing aircraft, i.e. it has full single engine performance and safety.





## PROGRESS ON LONDON MIDLAND REGION

### A Variety of Projects

#### CONSTRUCTION, ENGINEERING AND ROLLING STOCK

THE London Midland Region of British Railways has, of course, in hand a large number of projects connected with its modernisation programme. The following features serve to emphasise the wide variety of the tasks involved and also, in the first case, the problem of keeping pace at the same time with normal reconstruction work.

What is thought to be a unique engineering task, the reconstruction of a railway viaduct as a cellular embankment, has just been completed in 12 months on the line between Crewe and Sandbach, Cheshire. The reconstruction was necessary because of the perpetual subsidence of Elton Viaduct over the River Wheelock caused by local brine pumping operations. The viaduct, built in 1842, had for many years been affected by subsidence which fluctuated between 2 and 9 in. annually, and some 20 years ago the arches of the viaduct were filled in to make an embankment, leaving only one bridge opening over the river. It was necessary to lift this structure on a number of occasions and in 1952 and 1956 permanent steel struts had to be inserted between the abutments to keep them apart.

##### Cellular Construction

Having regard to the importance of the viaduct, which is on the main line to Manchester, and to the requirements of the electrification scheme being carried out on this line, it was finally decided to provide a form of cellular construction through the bridge opening. This permits an unlimited subsidence without the necessity to heighten or strengthen the existing abutments by an unpredictable amount.

The construction took the form of layers of 5 ft.

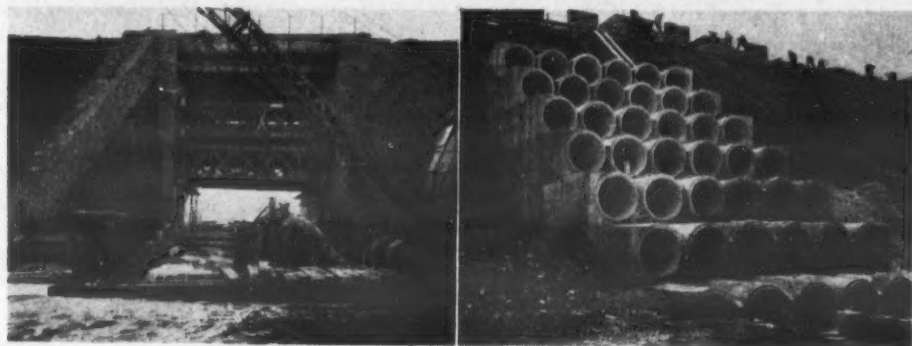
increases the pressure of the water supply for washing out boilers, has also been repositioned.

The shed will be retained for the servicing of steam and eventually diesel locomotives to be used on the branch lines round Nuneaton after electrification of the main Euston-Crewe line has been completed. The design and the main portion of the fabrication and erection of the roof were carried out by railway staff, and under the direction of Mr. J. Taylor Thompson, chief civil engineer, and the following sub-contractors were engaged: British Challenge Glazing Co., Limited, London; British Cellactite and Uralite, Limited, Gravesend, and Weatherall Roofing Co., Limited, Gravesend.

##### Modernisation at Mold Junction

A modernisation scheme involving the renewal and enlargement of the permanent-way layout at Mold Junction slate wharves and marshalling sidings, North Wales, is being started this month. The scheme will increase the efficiency of these busy sidings which deal with 12 regular freight trains daily and two or three special cattle trains a week. Some 630 wagons are handled there daily and intensive use is made of the sidings for shunting and marshalling of the trains.

Slate quarried locally are dispatched by rail through five siding-connected wharves at Mold Junction and to meet present-day requirements three of these wharves will be renewed. The other two are to be removed to make space for six new traffic sidings needed to provide additional siding accommodation for operating purposes. Some 1,100 yd. of old track will be removed and more than two miles of new permanent way installed.



Two views of Elton Viaduct, that on the left being taken last November and that on the right in June when the work was virtually finished

external diameter reinforced concrete pipes laid through the bridge opening, the completed work forming a honeycombed embankment. The bottom layer of pipes rests on a reinforced concrete raft and the pipes themselves are concreted together, and suitably reinforced so that the whole structure acts as a single unit. As the structure subsides the level of the embankment top will be maintained by adding further layers of pipes. So far as is known this construction represents a unique conception for overcoming the problem of perpetual subsidence.

##### New Manchester-Bury Trains

Preliminary details have been announced of the new electric trains for the Manchester-Bury line. Each train will consist of a two-car set—one a motor car and the other a trailer—with driving cabs at each end of the set. Sets may be combined to make longer trains as necessary. The bodies are of welded steel construction insulated against sound and changes in external temperature. Each two-car set will carry 16 first-class and 162 second-class passengers and the accommodation varies from compartment to open (saloon) type seating with provision for non-smokers. There is a ladies only compartment and a guard's brake compartment in each set. The two cars have 34 opening doors between them to facilitate speedy movement of passengers at stations.

Entirely new is the profile of the vehicles at the driving cab ends. In addition to being angled back from centre to the sides, the front of the cab also slopes back towards the roof, thus giving the driver better vision and improving the appearance of the train. Interior finish is a blend of timber and plastic-faced wall panelling with light alloy luggage racks. Double spring type seating is provided upholstered in moquette. The underseat heaters are thermostatically controlled.

Delivery of the first set from Wolverton Works is expected in March, 1959, after which deliveries will continue at the rate of one set a week until the whole order for 26 sets is completed at the end of August, 1959. The 1,200-volt d.c. protected conductor rail system will be retained and 26 English Electric four-motor equipments have been ordered.

##### Nuneaton Engine Shed Roof

Roof girders made from serviceable second-hand lengths of rail were used in the renewal of the engine shed roof at Nuneaton motive power depot, work on which is now nearing completion. The old rails were used for the main girders, roof frames and bracing, following successful experiments with them on other light roof structures of this type. The rails are of an ideal weight and shape for such purposes and are resistant to corrosion.

The old roof of the shed was of timber supported by cast-iron columns and brick side walls and had become due for renewal. The new roof is of modern design with two clear spans of 51 ft. supported on strengthened side walls and one central row of 11 steel stanchions replacing the previous 55 cast-iron columns. The used-rail main girders, roof frames and bracing are fabricated to a standard design. Smoke extraction troughs are fitted over the engine roads and the roof covering consists of patent glazing with asbestos ridge sheeting.

As a part of the general improvement of the shed the electric lighting will be brought up to modern standards and an electric barrel heater and pump installed. This equipment heats barrels of heavy oils to enable their contents to be pumped freely to tanks from which the oil is issued. Minor alterations and improvements have been made to stores, offices and permanent way and a new toolroom has been built. The booster pump, which

The job, which includes extensive drainage improvements, will involve much excavation and the demolition work to be carried out includes 600 yd. of masonry wall. The scheme is expected to be completed by the end of the year.

#### SAFE LOAD INDICATOR

##### For Lansing Bagnall Trucks

AT the recent Mechanical Handling Exhibition, Lansing Bagnall, Limited, demonstrated its safe load capacity indicator on the new model FOEP2 pedestrian-controlled fork-lift truck. Continuing development and extensive trials have been done with this device. The problem, says the manufacturer, has been largely one of measuring the sum of the forces acting on the tilting mast mechanism. With the new design, Lansing Bagnall has achieved a system of very accurate measurement of the moment of the load being lifted. This has been done by dispensing with the normal rigid mounting between the moving end of the tilting jack and the mast structure. The system incorporates a point of leverage on each mast frame member and this pair of points is connected to one central position. Here an aneroid type of bellows



Lansing Bagnall FOEP2 fork truck with load indicator at mast head

measures the sum of forces to which the tilting jacks themselves are subjected. The subsequent movement of the bellows is transferred hydraulically to a large diameter dial segmented into "safe," "operate with care," and "danger" zones.

The mechanism is so sensitive that even slight pressure of the fingers on the toe of the fork causes a perceptible variation in the indicator pointer. It is very simple in principle and trials to date indicate that it has not only a remarkable degree of accuracy but is capable of standing up to the rough treatment normally associated with industrial trucks. The pneumatic capacity indicator is patented throughout the world by Lansing Bagnall and is offered exclusively as an extra for use on any truck in the Lansing Bagnall range which is fitted with a tilting mast.

##### Two-ton Reach Truck

Introduction of a new FRER2 reach truck, with a capacity of two tons, brings this class of truck within the most popular range for fork-lift trucks. The FRER2 will handle 48 in. by 48 in. pallets and, it is claimed, will operate in gangways 7 ft. 6 in. wide. The weight of the truck is two tons. The driver has a seated position. Travelling speed is 5 m.p.h.



#### ...demands different principles

Nothing new under the sun...? Perhaps not but a completely new approach can often help to solve an old problem—or better still—improve on methods that have come to be traditional. Take the example of the common differential. After years of carrying it about as unsprung weight—part of a rigid rear axle—the imminent trend is to anchor the differential under the car body, and to provide universally jointed half-shafts with independently sprung wheels. De Dion's old idea has been proved a winner in recent racing. Now, there is no firm better placed to provide the universal joints than Hardy Spicer, nor are there any differentials more efficient than those by Salisbury Transmission. Look to Birfield for the best of transmission. Every member Company is backed by the resources—manufacturing and technical—of the whole Birfield Group.

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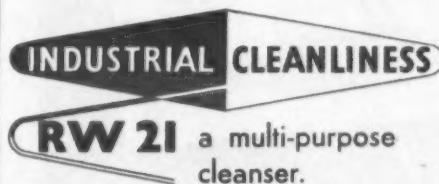


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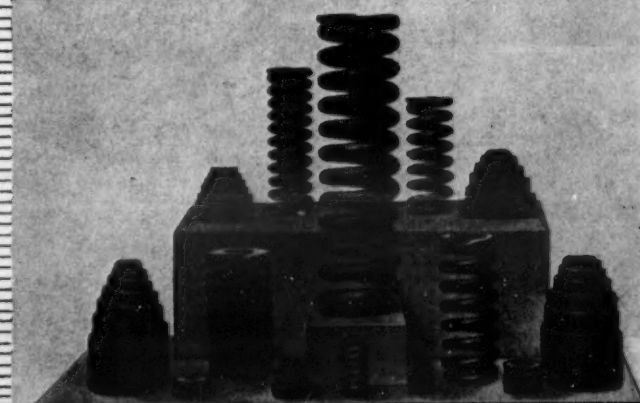
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## MORE CARS TO EUROPE

## Second Vessel for Dover—Ostend Service

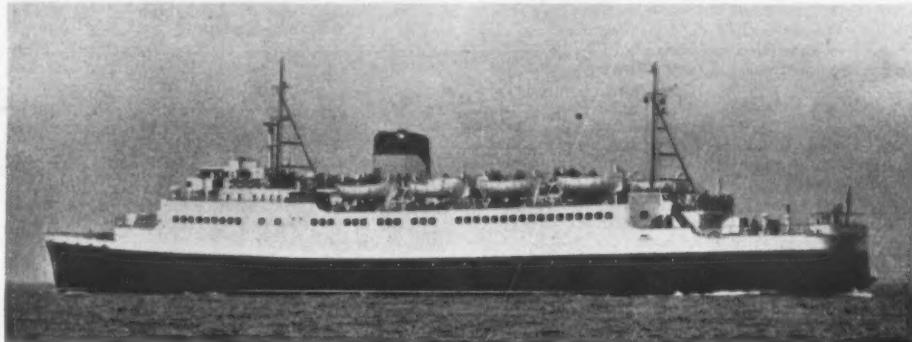
THE demand from British motorists wishing to take their cars abroad has grown steadily in the postwar years despite currency and other difficulties and both air and sea transport operators have been hard put to meet it in the peak period. Thus, between Dover and Ostend 7,917 of the 37,953 vehicles carried in 1957 were moved in July and 9,274 in August so that almost half the traffic moved in two months of the year. The total figure may moreover be compared with that of 15,945 for 1950. *Prinses Josephine Charlotte*, which has been the only car ferry operated by the Belgian Marine Administration on the Dover—Ostend route, has now been joined by *Artevelde* which can carry half as many cars again and there is a twice-daily service in each direction until September 15, whereafter the frequency is reduced to once daily.

Overall length of the new ship is 383 ft. 3 in. and her breadth without fenders is 49 ft. 2 in. Displacement at normal draught is 3,145 tons and the areas for 160 cars with a headroom of 6 ft. 10½ in. measure 7,319 sq. ft. and 7,373 sq. ft. The area with a headroom of 11 ft. 1½ in. which is intended

ship has been specially designed to eliminate vibration.

As already mentioned, the vehicle accommodation of the *Artevelde* extends over the whole C and D decks, representing a total area of 18,158 sq. ft. and allowing 160 cars to be taken easily. C deck, however, does not extend over the whole length of the ship, but is limited aft by the casing of the engine-room, at the main staircase level. Incorporated in this staircase is a ramp enabling the cars embarking through the main access gate to D deck (lower garage) to reach C deck (upper garage). In its normal position (down) this ramp occupies so much space as greatly to reduce the room provided for coaches in the rear part of the lower garage, where the headroom is 11 ft. 1½ in. A novel design has overcome this difficulty: the ramp lifts up and folds into two parts when the upper garage is full, and both articulated panels stand vertically. The ramp thus practically vanishes and takes up only a minimum space. Operation takes only a few seconds and is by hydro-electric gear.

In each vehicle deck a light turntable 13 ft. 1½ in.



The new car ferry "Artevelde" which has been placed on the Dover—Ostend service by Belgian Marine

to take coaches or caravans is 3,465 sq. ft. and it is expected that, on average, it will be possible to carry seven at a time. The ship, which has a speed of 21 knots, can carry 1,000 passengers.

## Accommodation

There are five decks lettered from A to E, the last being the lowest. The whole of C and D is allocated to vehicles. Of the remainder, E has two saloons for women passengers and two for men, of which one set is forward and one set is aft. In view of the night crossing operated in summer each pair of saloons has 124 berths and these are available without extra charge. Aft on B deck is the restaurant, seating 156, and this is linked by sheltered and glass-pannelled decks with a bar-terrace forward, seating 122. Finally on A deck are to be found two de luxe cabins, and the radio office, where a telephone and telegraph box enables passengers to come into direct contact with the networks ashore. Aft are also located six cabins, each for two passengers. Temperature as well as the humidity of all the passengers' accommodation is automatically controlled and the hull of the

in diameter can, if necessary, be used for handling really big cars, or those which have missed their turning. Drivers handle their own cars (under the crew's instructions) and drive them off again from the place where they have left them. From the garages there is easy access to the passenger accommodation, by means of two staircases (one forward and one aft).

Ventilation in the garages has been specially studied. The exhaust fumes from moving cars, or from those warming up while waiting to be driven off, are absorbed at the level where they are produced. Special measures have been taken also towards protection against fire, thereby justifying the retention of petrol in car tanks. The garages are partitioned by fireproof curtains and besides the usual firefighting appliances and the necessary fireproof coating, basic protection is given by an automatic sprinkler system.

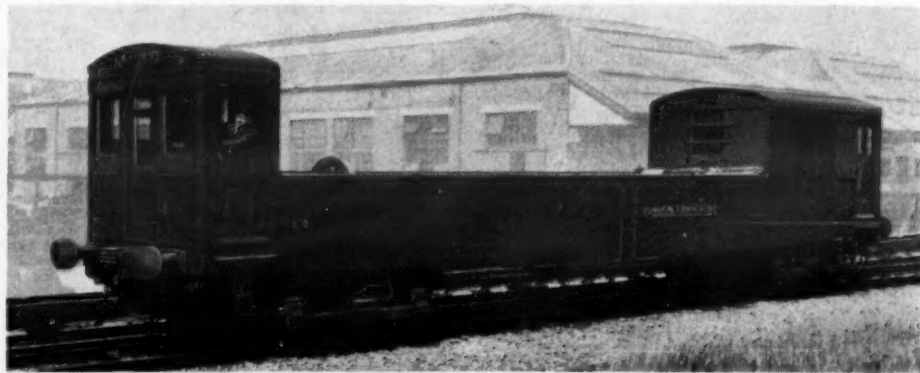
To enhance the passenger comfort, the Belgian Marine has had stabilisers fitted to *Artevelde*, which together with *Reine Astrid*, a passenger ship on the Dover—Ostend line, is the second Belgian vessel to be equipped with such apparatus.

## L.T.E. Stores Locomotives

## RENOVATION OF TWO BUILT IN 1909

TWO London Transport electric stores locomotives, Nos. L8 and L9, built as battery locomotives in 1909 by W. R. Renshaw and Co., Limited, of Sutton-on-Trent, are being renovated at Acton Works, being expected thereafter to give a further 15 years' service. They were used originally for track maintenance purposes for the

materials between Acton and Ealing Common, it has been decided that the obsolete traction equipment should be replaced by a later type for which spares are available. The original type of equipment fitted to L8 and L9 will then be in use only on L10, the Acton Works yard locomotive. A number of B.T.H. DB260 equipments, normally



L9, one of the two electric stores locomotives which London Transport is renovating, was originally built in 1909

Metropolitan District Railway and are among the oldest electric locomotives in the country.

Following the opening of Acton Works as a centralised railway overhaul works in 1922, there was an increased need for transhipment of materials to and from Ealing Common Depot. The two battery locomotives were converted prior to 1925, by removing the batteries and altering the battery compartment to provide an open gondola-type platform, to carry these materials and stores. With the removal of the batteries, the locomotives picked up current from the rails in the normal way.

In 1951, the original GE69-type traction motors were replaced by the GE12 type and were changed again in 1955-56 to the WT54 BB type. The original equipment, however, remained virtually unchanged. As it is considered that these locomotives still provide the best means of carrying

used with W254B motors, is available as a result of the scrapping of some District Railway 1910-13 C, D and E stock cars, and two of these equipments are to be used in L8 and L9.

This work will mean that the vehicles will then be fitted with traction control equipment of a type in general use on the District Line Q stock, and also that the wiring of the locomotives will be completely renewed during the renovation.

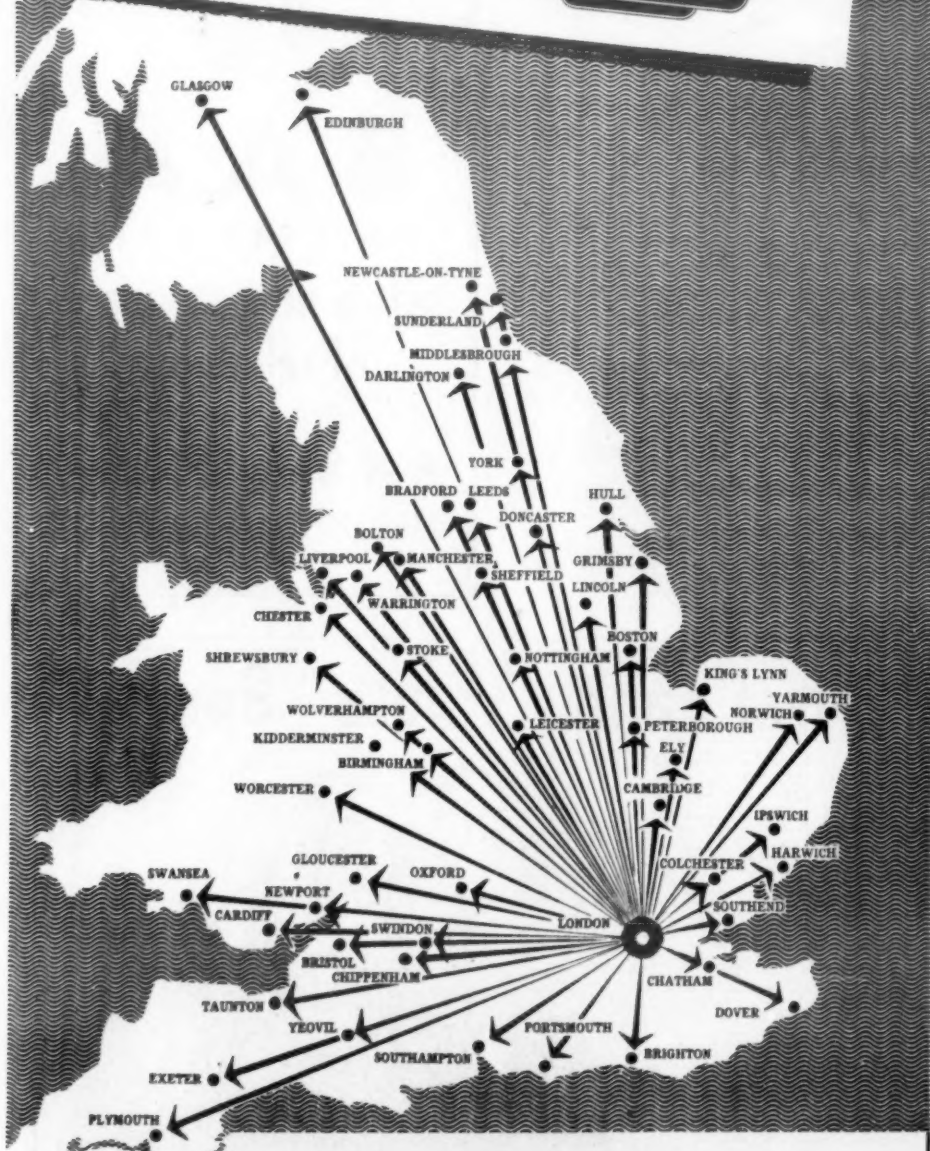
In a paragraph in our June 28 issue referring to safe-driving awards to Bowaters commercial vehicle drivers it appeared that only 8 per cent of those eligible qualified for awards in the 1957 R.O.S.P.A. competition. This should have read 87 per cent which, as was noted, is very considerably above the national average.

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EXPRESS  
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This map shows some of the many towns to which British Railways Express Freight Services can give next-day delivery for wagon-load traffic. It is a time-table service—and door-to-door transport can be provided. Express Freight charges are competitive with any other

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# MECHANISATION AT CARDIFF

## Other Modernisation Works

### TICKET OFFICES : FREIGHT ACCOUNTING : REFRESHMENTS

ON July 8 at Cardiff General Station, the Hon. Anthony Berry, member of the Western Area Board, British Transport Commission, officially opened new booking and inquiry offices and a new grillroom extension to the restaurant, and at Cardiff Newtown Goods Depot he inaugurated a new punched card centre for the complete mechanisation of traders' carriage accounts. The ceremonies were attended by Mr. A. C. B. Pickford, assistant general manager (traffic), Western Region, Mr. W. R. Stevens, divisional traffic manager, Cardiff, and other officers of the region and guests.

#### Cardiff General Booking Office

The mechanisation of the booking office at Cardiff General Station is the largest of its kind so far in Great Britain, and progress will be watched with great interest, as the experience gained will be of considerable value to all regions of British Railways. Small test installations at Chippenham and Caerphilly (where Multiprinter and Flexi-

As already recorded in MODERN TRANSPORT, an area accounting organisation is being developed by the commercial department of the Western Region for the mechanisation of traders' carriage accounts. It provides for the work which is now undertaken at some 312 stations in the region to be concentrated at four highly mechanised main centres. The first centre was Bristol, which commenced in October, 1957, and the second is Cardiff, which started on June 1 last. The third and fourth will be at Paddington and at a station in the Midlands yet to be chosen. The four centres, at which a wide range of the most modern Hollerith type of equipment will be installed, will prepare accounts involving approximately 1,250,000 Western Region consignment notes a month.

Concentration of the work at four specialised points justifies the introduction of a range of equipment which would not otherwise be possible. In addition to the preparation of accounts, the machines will enable a far greater variety of statistics related to rail carryings to be obtained than has hitherto been possible. The schemes, which have been developed in conjunction with the British Tabulating Machine Co., Limited, will lead to greater efficiency and at less cost than the more conventional methods in operation today. Under the system all consignment notes, after being checked against traffic and with charges inserted, will be passed from stations of origin to machine centres. There they will be sorted, by numerical coding, to the individual folders allocated to each trader. From each note a card will be punched and the accuracy of the punching verified independently. Pre-prepared cards, punched with name and address of each trader, will be associated with the appropriate daily detail cards and accounts will be prepared at stipulated periods. Simultaneously, separate summary cards will be produced for the period, and an independent mechanical check made of the total of these summary cards against the total of individual items recorded. The practical speed of production is about 4,000 to 5,000 entries per hour. The line of entry shown on the account is in skeleton form.

Accounts will be rendered four times monthly and will be accompanied by the consignment notes. Prior to release to traders consignment notes will, where necessary, be micro-filmed for record purposes. The practice of rendering four accounts with the final summary with the last rendition will, it is hoped, be to the mutual advantage of traders and British Railways. The original conception of area accounting centres has fitted in admirably with the subsequent development of the new traffic organisation.

#### Future Development

At the outset the Cardiff centre is preparing traders' accounts only and is confined to the work performed by the Cardiff goods depot. Subsequently it will take over preparation of goods freight accounts for stations in the remainder of the Cardiff district, similar work for the whole of the Newport district and the whole of the Swansea district. The staging of this take-over will depend upon the relative proficiency of the Cardiff operators and controlling staff. The occupants of these posts

printer machines respectively were introduced on January 1, 1958) have proved satisfactory, and the Western Region, having completed the mechanisation of Cardiff General and Queen Street booking offices, now deals with an annual issue at these two offices of 2,100,000 tickets, with a revenue of some £900,000, by the most modern ticket printing and accounting equipment available.

#### Sectionalised Booking

A detailed analysis of the allocation of the machines and bookings at Cardiff General Station has established that sectionalised booking is the most efficient, and ticket issues have been segregated and machines allocated in the following way. For bookings to "Valley" stations (i.e. local destinations on the valley lines and to Barry, Penarth and Vale of Glamorgan stations) one Flexiprinter with 526 ordinary and 16 season ticket printing blocks and one Miniprinter, with 12 print blocks for very high-speed issue of series in heavy demand, are provided. For bookings of a general nature to stations A-L there are a Multiprinter Major machine with 1,188 printing plates, a mobile Flexiprinter with 127 ordinary and 11 season ticket printing blocks to deal with peak bookings to Bristol and London, and a Rapid printer with 15 print blocks to deal with heavy issues such as excursions to selected destinations.

For bookings of a general nature to stations M-Z there is equipment similar to that provided on the A-L section with the Flexiprinter (125 ordinary and 15 season ticket printing blocks) operating as relief to the Multiprinter for heavy bookings to Newport and Swansea. Other machines have been provided in the Cardiff General booking office to cater for ancillary work. These are one to facilitate change giving, which is at present in an experimental stage, a note and coin weighing machine to speed up the checking of remittances, wages and cash, and a coin counting machine to speed up the counting of silver and more specifically of copper coins collected from toilets and platform ticket machines.

#### Inquiry Office

In the new inquiry office at Cardiff General a Multiprinter Major machine with 1,194 printing plates has been installed to cover a wide range of general advance bookings, giving the public, for the first time in Cardiff, the facility of making inquiries, reserving seats or sleeping berths and of purchasing rail tickets in the same office. At Cardiff Queen Street booking office a Multiprinter with 591 plates and a Flexiprinter on a mobile trolley with 185 ordinary and 45 season ticket print blocks have been provided. This station deals with a heavy local traffic to the Valleys, Barry and Penarth and the mechanised booking office has, since its introduction on May 1, proved itself capable of dealing efficiently with large crowds.

In this mechanisation scheme, two main objects have been borne in mind. Firstly, to give better service to the public by providing more booking points equipped with high-speed machines, thus speeding up the issue of tickets and, secondly, to accomplish the major portion of the daily and monthly accountancy and statistical work by mechanical means while maintaining an adequate check on the passenger revenue.

The booking clerks will, broadly speaking, be relieved of the present vast and complicated accountancy procedures and, when fully trained in the new techniques, will have far more time to deal with customers' needs and inquiries. The degree of mechanisation is such that at peak periods the dispersal of queues should be accelerated considerably. The staff has, in fact, been most co-operative in adopting the revised method of working and have proved adaptable and enthusiastic in accepting the changed arrangements.



The modernised inquiry office at Cardiff General Station



Interior of the new booking office at Cardiff General showing the Flexiprinter and, extreme right, part of the Multiprinter equipment

have either attended a residential training course at the Hollerith school at Cookham or been trained locally by instructors from the firm and, in addition, key members of the organisation have spent some time at the Bristol machine centre in order to gain practical experience. Co-operation on the part of the staff and the union augurs well for the future of the organisation.

#### New Restaurant and Grillroom

A new grill lounge and cocktail bar, to be known as "The Gower," and a modern refreshment room and bar named "The Red Dragon" have been opened at Cardiff General. A former dining and tea room has been transformed into a modern foyer cocktail bar and a grill lounge, and a traditional refreshment room has given place to a separate bar of modern conception together with a refreshment room incorporating new policies in service.

The grill lounge will be open for the service of main and light meals throughout the day and the new refreshment room will offer separate service points, with the alternative of hot or cold snacks and light meals with the usual hot non-alcoholic beverages together with a kiosk for the service of cold drinks, cigarettes and confectionery. A special feature of the new refreshment service is that all food served will be immediately and freshly prepared, both hot and cold light meals and snacks being made fresh to order and, with the use of the

(Continued on page 14)

# BOLTON'S COPPER PRODUCTS

## in Railway Engineering

### STEAM LOCOMOTIVES

FIREBOX PLATES including Wrapper, Door, Throat, Side and Tube-Plates in de-oxygenised arsenical copper suitable for welding.

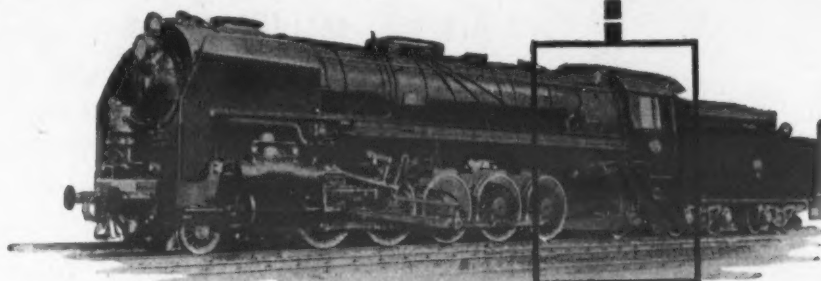
SOLID AND HOLLOW STAY RODS.

TUBES—all sizes and gauges of copper tubes for locomotive boiler and other purposes.

### ELECTRIC LOCOMOTIVES

BOLTON'S HIGH CONDUCTIVITY COPPER PRODUCTS are used extensively by the manufacturers of electric and diesel-electric locomotives for such purposes as field coils, armature coils and commutator bars of traction motors, generators and auxiliary machines and also for components of control equipment and pantograph wearing strips.

(Illustrated)  
Bolton's Copper Plates used in the Greek locomotives manufactured by Breda Elettromeccanica E Locomotive-Milan for the Greek Ministry of Transport



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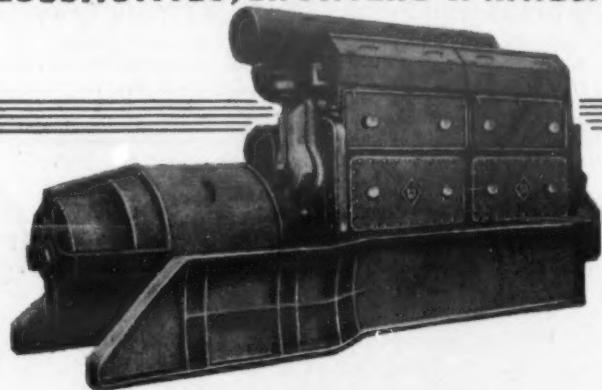
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# H & W Diesel Engines

## for LOCOMOTIVES, SHUNTERS & RAILCARS



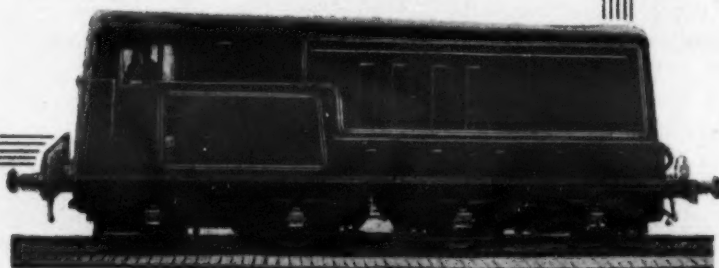
### TWO-CYCLE DIESEL ENGINES

AND

### FOUR-CYCLE SUPERCHARGED DIESEL ENGINES

### FOR RAIL TRACTION

Supplied as straight in-line or 'V' type units in powers from 250 b.h.p. to 2,000 b.h.p.



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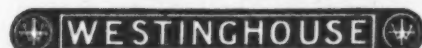
BELFAST GLASGOW LONDON LIVERPOOL SOUTHAMPTON

L. 246A





One of the fifty-seven new 3-car multiple-unit electric trains for Euston to Watford and Broad St. to Richmond Services of the London Midland Region of British Railways—built at Eastleigh and Ashford, and fitted with



### ELECTRO-PNEUMATIC BRAKES

Another addition to the list of services on which this system of braking is now in operation. The list includes London Transport, Southern Region, Eastern Region; North Eastern Region; Mersey and Wirral Services of the L.M. Region; Indian Govt. Rlys., Bombay and Calcutta Electrifications; New Zealand Govt. Rlys.; Toronto Subway.

Westinghouse Brake and Signal Co. Ltd., 82 York Way, London, N.1

Associated in India with Saxby & Farmer (India) Private Ltd., Calcutta; Associated in Australia with Westinghouse Brake (Australasia) Pty., Ltd., Concord West, N.S.W.  
Associated in South Africa with Westinghouse Brake & Signal Co. S.A. (Pty.) Ltd., Johannesburg  
Agents:—Bellamy & Lambie, Johannesburg

## Diesels don't bother me . . .

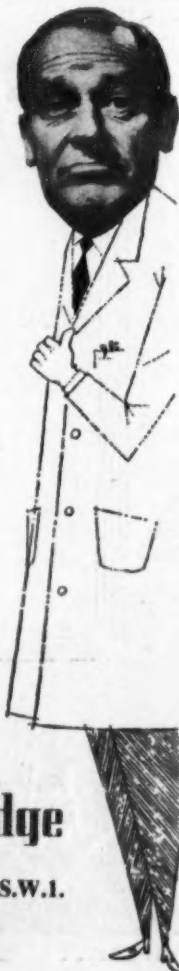
Mind you, at one time diesels were the bane of my life. More than half our fleet are diesels and whenever an engine needed servicing we had to send injectors and pumps all over the place to have them repaired. Trucks would stand around for a week at a time getting in everybody's way. And when we did get the parts back it meant burning the midnight oil to catch up on lost time. You can do too much of that these days. So we decided to do our own diesel servicing right here.

First we wrote to Leslie Hartridge Ltd. for details of their service equipment—and, incidentally, found they had a very good training scheme for our mechanics. When we picked our machine we got another pleasant surprise—it cost less than we thought it would. And when we started to use it—well, that's when we really found out why seven out of ten diesels are serviced on Hartridge. Now we test distributor pumps and in-line pumps on a single machine, and, thanks to electronic phasing, save three-quarters of an hour on the job. Variable speed control is easy too—you just turn a handle. And Light models have the new Overflow Calibration System for small outputs.

We've easily covered our costs now and on top of that our trucks have been on the road for hundreds of extra hours. It's a different business altogether . . .

since we got ourselves a Hartridge

LESLIE HARTRIDGE LTD. Dept. D, 9 Victoria Street, London, S.W.1.



## YEOMAN SERVICE

### From Five Prewar Scammells

FIVE prewar Scammell mechanical horses are performing efficiently varied tasks at the Sutton Coldfield works of International Alloys, Limited, after renovation and conversion costing comparatively little. Of the fleet of five Scammell MH-type mechanical horses—forerunner of the popular Scarab—three are doing the type of work for which they were designed, while the

Now carrying more than 100 tons of slag during a seven-day working week, the tipper was the first to be converted. It has been in this arduous service for some three years and is used to move slag from the aluminium foundry or from stock to the washing plant, the stock being scattered over a fairly extensive area of rough hilly country. Conversion of the tractor to a tipper included



International Alloys Scammell MH tractor conversions: The fire tender at practice on a nearby canal bank; right, the tipper at work on typically difficult ground conditions in the works area

others have been converted into a tipper and a fire tender.

The three conventional MH tractors are employed in conjunction with a large fleet of semi-trailers, including 10 of Scammell manufacture, each carrying up to 14 tons of aluminium ingots, slag, swarf or various raw materials. The Scammell tractors operate solely within the works, serving as shunting units for the semi-trailers which they haul to and from scattered positions on the 35-acre site to a central area where they are picked up for outside delivery by International Alloys' large fleet of Leyland Comet-Scammell tractors.

the fitting of twin 7.50-20 tyres and wheels at the back and the mounting of Antony Hoist tipping gear and body. Good stability is essential to combat unevenly distributed loads throughout the body, as well as to negotiate the rough ground.

Showpiece of International Alloys' MH conversions is the fire tender. Equipped all round with 10.50-16 track-grip tyres and a 230-gal. water tank, the tender can reach any part of the site with ease. Although in its 21-year life it has not yet been called to a fire, it is regularly taken out on fire practice, often towing a trailer over the most difficult ground conditions in the area.

### SELF-CONTAINED SPRAYGUN

#### Electrospray Claims

QUITE remarkable performance is claimed for a Swiss-designed portable electric spraygun named Electrospray introduced into this country and Ireland by Edmundsons Tools, Limited, 64-66 Newington Causeway, London, S.E.1, sole concessionaire for the Reinhold Electrospray Manufacturing Company, Geneva. Among the performance characteristics mentioned in a brochure available from Edmundsons Tools, Limited, are an ability to deal with a wide variety of materials; instantaneous adjustment from flat to circular spray pattern and width of



The self-contained and versatile Electrospray

spray variable from a spot the size of a sixpence to 4 to 8 in., depending on the material; negligible overspray, obviating the necessity for masking and resulting in a paint saving of 20 per cent or more; absence of oil, water and air bubbles in spray; and a reduction in viscosity of most materials being sprayed due to heat transmitted from motor-turbine housing.

#### Viscometer Provided

The Electrospray is said to weigh no more than the conventional spraygun of similar capacity, though it embodies a built-in electric motor for operation from various a.c. mains voltages. It is supplied with a viscometer for checking the correct reduction of materials to be sprayed, 10 ft. of electric lead and two spare jets. Spare quart-capacity paint cups cost extra. The list price is £32 10s. and it is to be distributed through the tool trade at the usual discounts.

### DUDLEY ZOO CHAIR-LIFT

#### Dunlop Disc Brakes Installed

AN unusual application for the Dunlop disc brake is the new chair-lift at Dudley Zoo. The lift, the first of its kind in Britain and similar to the ski-lifts installed at many winter sports resorts, carries passengers from the main gate up the steep slope of the hill to the ruined walls of the castle, around which the animal and bird enclosures are situated.

The disc brake installation is fitted to the drive shaft of the main sheave; it consists of two sets of



Dudley Zoo chair-lift, which incorporates Dunlop disc brakes

calipers mounted across the diameter of a steel disc. The brakes are applied mechanically and are retracted from the disc hydraulically. The actual stopping time is 6 sec., representing only 12 ft. of travel of one of the 47 chairs which make up the installation.

### CARDIFF MECHANISATION

(Continued from page 13)

very latest equipment, prepared in full view of the customer.

The new service at Cardiff represents in "The Gower" British Railways catering policy of providing dining facilities for those who prefer personal attention and, by means of "The Red Dragon" refreshment room, a self-service facility at popular prices for the great number of people who have not the time or the inclination to take a larger meal. Whilst hot meals and snacks have been introduced at many refreshment rooms, "The Red Dragon" is the first to be equipped to undertake, in one establishment, so many varieties.

## SILVER ROADWAYS LTD.

Reliable Trunk Services to all Ports

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## SOCIAL AND PERSONAL

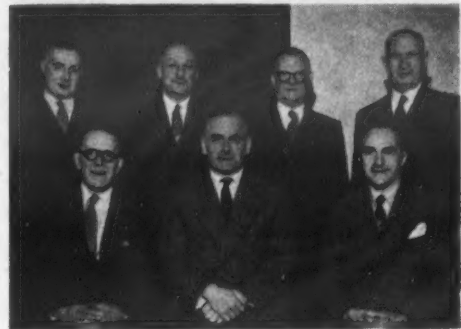
### Transport Readership at Oxford

THE electors of the University of Oxford to the readership in the economics and organisation of Transport have appointed Mr. D. L. Munby, M.A., to the readership for seven years from October 1. Mr. Munby was a scholar of Rugby School and of Wadham College, Oxford. He took a first in honour moderations in 1939 and a first in modern greats in 1947. In 1948-49 Mr. Munby was a lecturer at Christ Church, Oxford, and since 1949 has been lecturer in Political Economy at King's College, University of Aberdeen. His publications include *Industry and Planning in Stepney*, *The Cost of Industrial Dispersal from London*, *The Price of Fuel*, and *Transport Costs in the North of Scotland*.

We regret to record the death of Mr. S. T. T. Geary, M.A., B.Sc., A.M.Inst.T., transport manager, Ansell Brewery, Limited, Birmingham. He was 64.

Mr. D. S. Richardson has been appointed sales manager to the Nightingale Engineering Co., Limited, a subsidiary of Atkinson Vehicles, Limited, and is responsible for all sales in the London area. Mr. Arthur R. Young, formerly with the Nightingale Engineering company, has been appointed sales liaison officer for Atkinson and will be domiciled at the Walton-le-Dale works.

On July 2, Mr. H. C. Johnson, general manager of the Eastern Region, was host at a luncheon at the Great Northern Hotel, Kings Cross, to those



Mr. H. C. Johnson with Eastern Region civic dignitaries

members of the staff in the Eastern Region who have been elected to civic office during the 1958-59 municipal year. Seen in our illustration are, standing, left to right:

Councillor J. J. Walsh, Deputy Mayor of Leyton,  
Councillor A. Harvey, Mayor of Doncaster,  
Councillor C. C. Thurlow, Deputy Mayor of Harwich,  
Councillor R. Ratcliffe, Deputy Mayor of Ipswich.

Seated, left to right:

Councillor W. J. Low, Mayor of Leyton,  
Mr. H. C. Johnson, general manager, Eastern Region,  
Councillor H. R. Muskett, Mayor of Great Yarmouth.

To expand sales of U.S. Royal tyres in Great Britain, the North British Rubber Co., Limited, the U.K. affiliate, announces the creation of a new position of tyre advertising and sales promotion manager to be filled by Mr. A. C. Barrett.

The Transportation Club is inviting applications for new members. It is pointed out that newcomers may join for an initial six-month period for six guineas. Visitors from the provinces or overseas can obtain temporary membership cards. Ladies may now be brought in as guests at lunch.

We regret to record the death of Captain Carlton F. Roberts, M.C., M.I.Mech.E., formerly transport engineer and manager of Hovis, Limited, and then chief engineer of Transport Services, Limited, the pre-nationalisation road haulage group. He served B.R.S. as stores officer in the South Eastern Division before retiring in 1955. Captain Roberts was 68.

On Tuesday this week, the Minister of Transport and Civil Aviation, Mr. Harold Watkinson, accompanied by Sir Gerard d'Erlanger, chairman of B.O.A.C., left London for the U.S.A. by Britannia aircraft at the invitation of the Port of New York Authority to review some of the problems which will arise when very large jet aircraft are ready for



Mr. Harold Watkinson is presented with an ashtray memento at the opening of the new Monsanto oil additive research laboratories (see page 1) by Sir Miles Thomas

service across the North Atlantic. In particular, he will exchange views with the Port of New York Authority about the problem of jet aircraft noise. Mr. Watkinson will fly to Ottawa on his way to New York in order to meet the Canadian Minister of Transport, Mr. George Hees, for a general discussion.

Having regard to continued ill-health, Mr. E. J. Waddington has been granted sick leave until December 31 when, on reaching normal retirement age, he will retire from his offices of director of finance of Vickers, Limited, and of Vickers-Armstrongs, Limited, and also from the boards of directors of those two companies. In the absence of Mr. Waddington on sick leave his duties as director of finance will be assumed by Mr. R. P. H. Yapp. Mr. B. L. Snow has been appointed sales manager of Vickers-Armstrongs (Engineers), Limited, and a special director.

### L.M. Divisional Offices

FOLLOWING formal opening in Liverpool in May of the offices of the first of six divisional headquarters established under the London Midland Region reorganisation, the offices of other geographical divisions were to be opened in Barrow on July 1, London on July 4, Manchester on July 7, and Nottingham on July 10. A further divisional office is yet to be opened at Birmingham. The Lord Mayor of London opened the London office and the opening ceremonies at other places were performed personally by Mr. David Blee, general manager of the London Midland Region, in the presence of Lord Mayors, Mayors and leaders of local civic and commercial affairs. In each of the divisions concerned—namely, Merseyside and North Wales, London, East Lancashire, East Midlands, West Midlands and Northern—the new divisional offices, says the L.M.R., will have the effect of bringing the business and travelling community into closer touch with the railway. At a housewarming party held by Mr. R. L. E. Lawrence, divisional traffic manager, London, one could appreciate the excellent layout of the modern offices on the ground floor of 22-25 Finsbury Square, E.C.2 (Metropolitan 8891).

Mr. V. Held has been appointed spare parts manager for Associated Commercial Vehicles, Limited, succeeding the late Mr. Hitchens.

Mr. C. E. Duntun, chief civil engineer, London Transport, has been elected president of the Permanent Way Institution for the ensuing year. He will assume office on January 31, 1959.

Mr. M. Mothio has been appointed sales manager of the London division of Shell-Mex and B.P., Limited. He succeeds Mr. C. S. Martin, who has been appointed manager of the company's North Western division.

Appointment of Mr. D. A. Stringer, hitherto docks manager, Fleetwood, as docks manager, B.T.C., East Coast Scottish Ports, located at Grangemouth, is announced. He is succeeded at Fleetwood by Mr. A. D. Morgan, assistant docks manager, King's Lynn.

Mr. C. W. Adshead, A.M.I.Mech.E., and Mr. C. L. J. Freeman, F.C.I.S., have been appointed joint managing directors of Setright Registers, Limited; Mr. Freeman retains the position of secretary. Mr. H. C. Carter, commercial manager, has now been appointed a director.

Mr. F. Seekings, F.R.I.C.S., divisional estate officer, North Eastern Division, British Transport Waterways, retired on June 30 after 45 years' service with British Transport Commission and its predecessors. His successor is Mr. A. H. Harper, A.R.I.C.S.

At the annual general meeting of the Scottish Motor Trade Association in Glasgow on July 4, Mr. A. J. Cornack (Edinburgh) was unanimously elected president for the ensuing year in succession to Mr. G. Valentine, who was co-opted as immediate past president. Mr. E. Thompson, C.A. (Dundee), was appointed retailer vice-president.

Mr. M. A. Henstock, B.Sc.(Eng.), who was recently appointed assistant supplies and contracts manager, London Midland Region, entered the service of the Midland Railway in 1920 as a privileged apprentice at Derby locomotive works. Appointed senior mechanical inspector to the chief mechanical engineer at Derby in 1943, he was transferred to the locomotive works in 1944 as assistant to the works superintendent for maintenance of locomotives. He was appointed assistant works superintendent in the locomotive works in 1948.

London Transport announces that certain officers in the department of the chief mechanical engineer (railways) will no longer be designated "assistant mechanical engineer" for their respective functions and, in consequence, Mr. G. S. Bingham, M.I.Mech.E., M.I.Loco.E., M.Inst.T., becomes mechanical engineer (works—railways), Mr. J. G. Bruce, B.Sc.(Eng.), M.I.E.E., M.Inst.T., M.I.Loco.E., becomes mechanical engineer (running—railways); furthermore, Mr. R. I. D. Arthurton, B.Sc.(Eng.), A.M.I.Mech.E., A.M.Inst.T., M.I.Loco.E., now becomes mechanical engineer (development—railways), and Mr. I. W. Standing, A.M.I.E.E., becomes mechanical engineer (lifts and escalators).



Mr. G. O. Waters (left), lately chairman and managing director, Air Terminals, Limited, was recently presented by Mr. A. C. Ping, the present chairman, with a set of garden furniture from colleagues to mark his retirement

A challenge shield for the best all-round depot in British Waterways for 1957 has been won by the Sampson Road Depot, Birmingham, South Eastern Division.

On July 26 this year a party of eight boys from Radley College leaves for a tour of the U.S.A. and Canada. These boys, all between the ages of 17 and 18, have been selected from those at the school intending to make their careers in industry. They will see American and Canadian industry and something of the countries and their respective ways of life. A number of British industries and firms has assisted the project in various ways. The provisional itinerary takes in the Saint Lawrence Seaway, the Ford or Chrysler plant in Detroit, the Lockheed aircraft factory on the West Coast and an oil refinery.



THE MASTER CLEANER

The greatest enemy of efficient production—DUST, whether it is creating a fire risk, damaging machinery, blanketing heat and light, jeopardising health, ruining paint or causing extra labour can, unknown to you, gradually whittle down your profits.

Eliminate dust with NEW WELBECK industrial suction cleaners—the most advanced and efficient machines on the market today. Your premises need NEW WELBECK to restore lost profits.

WE SERVE THE LEADERS OF INDUSTRY

A NEW WELBECK 'Simplex' model being used by Brighton Corporation Transport.



Write now for further information to Dept. 17.



By appointment to  
H.M. The Queen  
Supplier of  
Vacuum Cleaners

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LONDON OFFICE: 6 Cavendish Square, London, W.1  
Tel: LANCING 1817 (PBX)



## DIESEL-ELECTRIC LOCOMOTIVES FOR MAIN LINE SERVICE

As part of their far-reaching modernisation plans, British Transport Commission called upon BTH to supply ten 800-h.p. diesel-electric locomotives for main-line freight duty. The illustration shows the first of these locomotives on test.



## BRITISH THOMSON-HOUSTON

THE BRITISH THOMSON-HOUSTON COMPANY LIMITED · RUGBY · ENGLAND

an A.E.I. Company

A5315



## IMPORTANT CONTRACTS

## Diesel Sets for West Country

THE first multiple-unit diesel trains for service in the West Country are to be provided from an order for 48 diesel cars and trailers which has been placed by the British Transport Commission for the Western Region, British Railways. Most of the vehicles are intended for such services and more than half of them will be operated as three-car train sets, each with a buffet car. The remainder will be used as single units or with trailers cars. They have been ordered from the Pressed Steel Co., Limited, Paisley. There will be nine motor brake open composites, nine motor open seconds with lavatories and 10 trailer open seconds with buffets for three-car sets, 14 motor second brakes with a driving cab at each end for use singly or with trailer and six driving trailer seconds. All the vehicles will be 63 ft. 6 in. long and two B.U.T. 150-h.p. engines will be fitted in each of the 32 powered cars.

## South Wales Docks Contracts

Recent contracts placed by the British Transport Commission (South Wales Docks) include the following:

Fairfield Shipbuilding and Engineering Co., Limited, for the supply and erection of new outer lock gates, Port Talbot Docks.

Land and Marine Contractors, Limited, for reconstruction of crane track for new bulk discharging berth, No. 2 Dock, Barry Docks.

General Engineering (Swansea), Limited, for general overhaul of s.b.b. Sir Ernest Palmer.

## Ceylon Orders British Equipment

Crompton Parkinson, Limited, has been awarded a contract by the Ceylon Government valued at £250,000 for the supply of three large transformer substations for the island's electricity development scheme. One of the deciding factors in placing the contract, which was keenly contested by European manufacturers, was ability to deliver in time for the substations to be brought into service by the end of 1959.

## London Midland Region Contracts

The London Midland Region of British Railways announces the following contracts:

Saunders and Taylor, Limited, Manchester, 3, for steam heating in general and mechanical foundries of the Locomotive Works, Horwich.

Brooks Ventilation Units, London, W.C.2, for inlet and ventilating plant in general iron foundry, Locomotive Works, Horwich.

John Booth and Sons (Bolton), for steelwork of new bridge on Liverpool and Manchester line over Manchester Outer Ring Road at Barton Old Hall.

## Metropolitan Line Bridge Reconstruction

Work has started on the reconstruction of the bridge carrying the road over the Metropolitan Line in Green Lane by Northwood Station. London Transport has awarded the contract to William Old, Limited; the work will take about 12 months to complete and will cost about £27,000. The present iron-structure bridge will be replaced with a new steel and concrete structure and widened from 40 ft. to 49 ft. 6 in. Another span will be added on the north side of the bridge ready for a fourth railway track. The old bridge has been in use since the railway was opened in 1887. Work will go on only on one side of the bridge at a time, so that the road can be kept open for single-line traffic.

## Eastern Region Resignalling

Two important contracts have recently been placed with Westinghouse Brake and Signal Co., Limited, for the supply and installation of signalling equipment in connection with the electrification on the 50-cycle a.c. system of the suburban lines of the Eastern Region, British Railways, between Bethnal Green and Hackney Downs, Enfield Town, Chingford, Cheshunt, Broxbourne, Bishops Stortford and Hertford East and also on the London, Tilbury and Southend section between Basildon and Shoeburyness. The former contract entails substantial modifications to the existing signalling equipment between Bethnal Green, Hackney Downs, Enfield Town and Chingford installed by Westinghouse between 1934 and 1938, as well as the provision of new electric signalling equipment between Bury Street Junction, Bishops Stortford and Hertford East. This extends over a total of approximately 47 route-miles.

The London, Tilbury and Southend scheme involves the provision of new electric signalling equipment and covers approximately 20 route-miles. The scheme comprises the provision and installation of main d.c. searchlight signals, shunt and subsidiary signals, style M.3 high-voltage a.c. point machines and style R (a.c. immune) d.c. track circuits. All-electric route relay interlocking systems will be employed at Broxbourne, Harlow, Pitsea and Southend Central. The signalling at the new station to be built at Harlow New Town will be remotely controlled from the signalbox at Harlow, some two miles distant.

## TENDERS INVITED

THE following items are extracted from the Board of Trade Special Register Service of Information. Inquiries should be addressed, quoting reference number where given, to the Export Services Branch, Board of Trade, Lacon House, Theobalds Road, London, W.C.1.

July 17—Burma.—Union Purchase Board for 50 12-v. 19-plate and 100 12-v. 15-plate BATTERIES. Tenders to the Director-General, Union of Burma Purchase Board, St. John's Road, Rangoon. (ESB/16591/58.)

August 1—Union of South Africa.—Durban Corporation for 75 (25 European, 50 non-European) SINGLE-DECK BUSES ready for service. Photocopies of tender documents from Export Services Branch, B.O.T., price 15s. (ESB/16112/58.)

August 8—Thailand.—State Railway for 10 DIESEL RAILCARS for metre gauge (50 lb.-yd. rail, 104 metric ton maximum axle load). Tenders to the Stores Superintendent, State Railway of Thailand, Yod-Se, Bangkok. (ESB/14345/58.)

August 8—Union of South Africa.—South African Railways for about 5,000 RAILWAYS of various types and WAGON COMPONENTS. The tender documents and drawings can be viewed in the offices of the High Commissioner for the Union of South Africa, South Africa House, Trafalgar Square, London, W.C.2. (ESB/13538/58.)

August 15—Union of South Africa.—South African Railways for 15 semi-luxury PASSENGER VEHICLES. Photocopies of tender documents from Export Services Branch, B.O.T., price 14s. (ESB/14489/58.)

August 20—Iraq.—Basra General Council for 40 single-deck DIESEL BUSES with spare parts. Tender documents and specifications from the Royal Iraqi Embassy, 22 Queen's Gate, London, S.W.7. (ESB/16119/58.)

August 22—Thailand.—State Railway for 70 CATTLE WAGONS for metre gauge. Photocopies of tender documents from Export Services Branch, B.O.T., price 3s. (ESB/14755/58.)

August 25—Sudan.—Sudan Railways for 18 heavy and five light main-line DIESEL-ELECTRIC LOCOMOTIVES. Specifications and drawings available on loan from Export Services Branch, B.O.T. (ESB/16442/58.)

Export Opportunity—Portuguese West Africa.—Alfredo F. Matos, Lda., Caixa Postal No. 459, Luanda, wishes to get into touch with United Kingdom manufacturers of diesel engines suitable for passenger vehicles of 14 to 2 tons and lorries of 5 to 7 tons who are not yet represented in Portuguese West Africa. (ESB/15222/58.)

## SHIPPING and SHIPBUILDING

## Easier Booking for Sea Travel

WITH the primary objective of easing the work of the travel agent in the selling of steamship space, and in this way securing for a passenger by sea the best possible service from their first contact with the agent to the completion of the voyage, an organisation known as Ocean Travel Development has been created by leading British passenger lines. Some of the matters which will be given early attention will be to review all the procedures for booking sea passages, the aim being to bring about all possible simplification. Means to avoid unnecessary differences of method between the practices of one company and another in booking procedure will be examined. Methods of ticket issuing will also be reviewed. Another object of O.T.D. will be to devise means of increasing the use of shipping by the travelling public by such methods as increased interchange between the lines and stop-over facilities, also the further development with travel agents of package tours. Early steps will be taken to discuss such matters with foreign shipping companies sharing similar interests.

Mr. F. H. Dawson, a director and general manager of the Cunard Steam-Ship Co., Limited, has been elected first chairman of O.T.D. and its general manager will be Mr. C. M. Squarey, who for the last nine years has been the ocean travel manager of Thos. Cook and Son, Limited. Membership of O.T.D. will, for the present, be open to any U.K. owners of ocean vessels carrying more than twelve passengers.

O.T.D. is an extension in the co-operation between deep-sea passenger lines and is being established with the full support of the General Council of British Shipping, which will co-operate wherever possible with a view to ensuring the success of the work of this new enterprise. The functions of the national shipowners' organisations will remain unchanged, and the work of O.T.D. will be complementary to them and to the work of passenger liner conferences. (In our May 3 issue it was noted that the Chamber of Shipping has persuaded the Government to dispense with the elaborate manifest now required, and that an amending statutory instrument enabling this change is to be laid before Parliament.)

## Niarchos Yard

FABRICATION is due to start on July 15 on the first order at the Niarchos yard at Scaramanga, near the island of Salamis, Greece, a 25,000-ton vessel for the Niarchos group. Under an agreement signed two years ago with the Greek Government, the Niarchos interests agreed to spend more than £3 million on the shipyard, but it is now stated that after full development of the shipyard in the next five years it was expected that about £7 million would be spent.

## Another Car Stowage System

FALSE decks in the holds of dry cargo vessels constructed of tubular steel scaffolding and wooden decking have been developed by Tatham, Bromage and Co., Limited, in conjunction with Acrow (Engineers), Limited, for the carriage of cars. With the new system as many as 600 to 700 unpacked average sized motorcars can be stowed on board a Liberty ship or larger vessel, and the scaffolding can be easily removed for employment in another vessel after use. The method is in fact particularly useful where only temporary or intermittent use is required. Total weight of the scaffolding and decking used is little more than 200 tons.

## Australian Raw Sugar Terminals

AT six ports on the north-east coast of Australia—Mackay, Townsville, Bundaberg, Mouralyan, Livenda Point and Bowen—large silos or storage sheds where raw sugar can be stored in bulk are now being constructed. The first of these new sugar terminals, at Mackay, was recently opened at a cost of £1,600,000. It is 1,000 ft. long, 150 ft. wide and 87 ft. in elevation and covers an area of 3½ acres. To give some idea of the enormous area of the roof it is of interest to note that in view of the climatic conditions of Queensland, a 30,000-gal. drinking water tank is to be filled from the rainwater collected on only a small section of it. The silo, when full, will hold 150,000 tons of raw sugar. Total staff is 22. Whereas before it took some 5,000 man-hours to fill an 8,000-ton cargo ship, today it takes less than 30—three day's work for a single operator.

When raw sugar arrives at Mackay it is tipped on to a conveyor belt and carried to one of the 40 ft. by 6 ft. movable hoppers in the roof of the shed. The floor of the hopper is automatically opened and the sugar falls on to a chosen point on the main pile. In the floor of the vast sheds are a line of 76 further hoppers, each of which can be gravity-fed. These take the sugar to a system of pipes carried out to sea on a boom which feeds the holds of the vessel at the rate of 750 tons an hour.

## FINANCIAL RESULTS

NOTES on the trading results, dividends and financial provisions of companies associated with the transport industry are contained in this feature, together with details of share issues, acquisitions and company formations or reorganisations.

## Fodens

Dividend of Fodens, Limited, is 12½ per cent (same). Group net profits for the year ended March 29 were £146,117 (£182,230), after tax of £126,064 (£164,435).

## Simms Motor and Electronics Corporation

Consolidated group profit of Simms Motor and Electronics Corporation, Limited, for 1957 was £927,861 before tax £933,580. Net group profit is £320,275. General reserve receives £171,475 and total ordinary distribution is 114d. per 5s. share. Simms Motor Units, Limited, is now fully tooling up for production of the Tencac diesel engine hand starter and larger hatches are now operating very successfully.

## Duple Offer for Willowbrook

Duple Motor Bodies, Limited, has made an offer for the £181,000 paid-up share capital of Willowbrook, Limited, Loughborough, on the basis of 2s. per 2s. share to be provided as to one-half in cash and one-half in fully paid 7½ per cent second cumulative preference shares. The offer is subject to not less than 90 per cent acceptance. If it becomes unconditional Duple will create a new class of 300,000 7½ per cent £1 second preference shares. Willowbrook directors recommend acceptance of the offer.

## British Tabulating and Powers-Samas

The British Tabulating Machine Co., Limited, and Powers-Samas Accounting Machines, Limited, controlled by Vickers, Limited, have reached agreement in principle for a merger of their businesses. A new operating company will be set up to take over the undertakings of both companies in return for the issue of ordinary shares. British Tabulating will hold 62 per cent of the equity in the new company and Powers-Samas 38 per cent. The main purpose of this merger in the punched card and computing fields is to improve efficiency.

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